Sequence Listing

<110> SMITH, VICTORIA

<120> METHODS AND COMPOSITIONS FOR DETECTING DYSPLASIA

<130> P2000R1

<140> US 10/712,124
<141> 2003-11-13

<150> US 60/425,813
<151> 2002-11-13

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<212> DNA
<213> Homo sapien

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gttttccttt gggttcagtt tgaacgggag gtttttgatc cctttttttc 200

agaatggatt atttgctcat gattttctct ctgctgtttg tggcttgcca 250

aggagctcca gaaacagcag tcttaggcgc tgagctcagc gcggtgggtg 300

agaacggcgg ggagaaaccc actcccagtc caccctggcg gctccgccgg 350

tccaagcgct gctcctgctc gtccctgatg gataaagagt gtgtctactt 400

ctgccacctg gacatcattt gggtcaacac tcccgagcac gttgttccgt 450

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acattatgga gaaagactgg aataatcata agaaaggaaa agactgttcc 650

aagcttggga aaaagtgtat ttatcagcag ttagtgagag gaagaaaaat 700

cagaagaagt tcagaggaac acctaagaca aaccaggtcg gagaccatga 750

gaaacagcgt caaatcatct tttcatgatc ccaagctgaa aggcaatccc 800

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cggggcctgt ctgaagccat agcctccacg gagagccctg tggccgactc 900

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ttggtctctt ctttcatctg gggatgacaa tggacctctc agcagaaaca 1100

cacagtcaca ttcgaattcg ggtggcatcc tccggagaga gagagaggaa 1150

ggagattcca cacaggggtg gagtttctga cgaaggtcct aagggagtgt 1200

ttgtgtctga ctcaggcgcc tggcacattt cagggagaaa ctccaaagtc 1250

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caaacatgca agtaaagaaa aaaaaaaaaa aaaa 1334

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<212> PRT
<213> Homo sapien

<400> 2

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Gln Gly Ala Pro Glu Thr Ala Val Leu Gly Ala Glu Leu Ser Ala
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Val Gly Glu Asn Gly Gly Glu Lys Pro Thr Pro Ser Pro Pro Trp
             35                  40                  45

Arg Leu Arg Arg Ser Lys Arg Cys Ser Cys Ser Ser Leu Met Asp
             50                  55                  60

Lys Glu Cys Val Tyr Phe Cys His Leu Asp Ile Ile Trp Val Asn
             65                  70                  75

Thr Pro Glu His Val Val Pro Tyr Gly Leu Gly Ser Pro Arg Ser
             80                  85                  90

Lys Arg Ala Leu Glu Asn Leu Leu Pro Thr Lys Ala Thr Asp Arg
             95                 100                 105

Glu Asn Arg Cys Gln Cys Ala Ser Gln Lys Asp Lys Lys Cys Trp
            110                 115                 120

Asn Phe Cys Gln Ala Gly Lys Glu Leu Arg Ala Glu Asp Ile Met
            125                 130                 135

Glu Lys Asp Trp Asn Asn His Lys Lys Gly Lys Asp Cys Ser Lys
            140                 145                 150

Leu Gly Lys Lys Cys Ile Tyr Gln Gln Leu Val Arg Gly Arg Lys
            155                 160                 165

Ile Arg Arg Ser Ser Glu Glu His Leu Arg Gln Thr Arg Ser Glu
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Thr Met Arg Asn Ser Val Lys Ser Ser Phe His Asp Pro Lys Leu
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Lys Gly Asn Pro Ser Arg Glu Arg Tyr Val Thr His Asn Arg Ala
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200 205 210

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<212> DNA
<213> Homo sapien

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gacacaaagg actctcgacc caaactgccc cagaccctct ccagaggttg 200

gggtgaccaa ctcatctgga ctcagacata tgaagaagct ctatataaat 250

ccaagacaag caacaaaccc ttgatgatta ttcatcactt ggatgagtgc 300

ccacacagtc aagctttaaa gaaagtgttt gctgaaaata aagaaatcca 350

gaaattggca gagcagtttg tcctcctcaa tctggtttat gaaacaactg 400

acaaacacct ttctcctgat ggccagtatg tccccaggat tatgtttgtt 450

gacccatctc tgacagttag agccgatatc actggaagat attcaaatcg 500

tctctatgct tacgaacctg cagatacagc tctgttgctt gacaacatga 550

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atccaaagaa catctgcact cctgaacaca ccctgaagaa atcctgggaa 1300

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cgtgttgatg aggcagatgg agatcagagg ttactagggt ttaggaaacg 1450

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<211> 175
<212> PRT
<213> Homo sapien

<400> 4

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				20				25						30
Lys	Asp	Thr	Lys	Asp	Ser	Arg	Pro	Lys	Leu	Pro	Gln	Thr	Leu	Ser
				35				40						45
Arg	Gly	Trp	Gly	Asp	Gln	Leu	Ile	Trp	Thr	Gln	Thr	Tyr	Glu	Glu
				50				55						60
Ala	Leu	Tyr	Lys	Ser	Lys	Thr	Ser	Asn	Lys	Pro	Leu	Met	Ile	Ile
				65				70						75
His	His	Leu	Asp	Glu	Cys	Pro	His	Ser	Gln	Ala	Leu	Lys	Lys	Val
				80				85						90
Phe	Ala	Glu	Asn	Lys	Glu	Ile	Gln	Lys	Leu	Ala	Glu	Gln	Phe	Val
				95				100						105
Leu	Leu	Asn	Leu	Val	Tyr	Glu	Thr	Thr	Asp	Lys	His	Leu	Ser	Pro
				110				115						120
Asp	Gly	Gln	Tyr	Val	Pro	Arg	Ile	Met	Phe	Val	Asp	Pro	Ser	Leu
				125				130						135
Thr	Val	Arg	Ala	Asp	Ile	Thr	Gly	Arg	Tyr	Ser	Asn	Arg	Leu	Tyr
				140				145						150
Ala	Tyr	Glu	Pro	Ala	Asp	Thr	Ala	Leu	Leu	Leu	Asp	Asn	Met	Lys
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<212> DNA
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<211> 824
<212> PRT
<213> Homo sapien

<400> 6

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			20					25					30		
Val	Val	Leu	Pro	Arg	Arg	Leu	Pro	Gly	Pro	Arg	Val	Arg	Arg	Ala
			35					40					45		
Leu	Pro	Ser	His	Leu	Gly	Leu	His	Pro	Glu	Arg	Val	Ser	Tyr	Val
			50					55					60		
Leu	Gly	Ala	Thr	Gly	His	Asn	Phe	Thr	Leu	His	Leu	Arg	Lys	Asn
			65					70					75		
Arg	Asp	Leu	Leu	Gly	Ser	Gly	Tyr	Thr	Glu	Thr	Tyr	Thr	Ala	Ala
			80					85					90		
Asn	Gly	Ser	Glu	Val	Thr	Glu	Gln	Pro	Arg	Gly	Gln	Asp	His	Cys
			95					100					105		
Leu	Tyr	Gln	Gly	His	Val	Glu	Gly	Tyr	Pro	Asp	Ser	Ala	Ala	Ser
			110					115					120		
Leu	Ser	Thr	Cys	Ala	Gly	Leu	Arg	Gly	Phe	Phe	Gln	Val	Gly	Ser
			125					130					135		
Asp	Leu	His	Leu	Ile	Glu	Pro	Leu	Asp	Glu	Gly	Gly	Glu	Gly	Gly
			140					145					150		
Arg	His	Ala	Val	Tyr	Gln	Ala	Glu	His	Leu	Leu	Gln	Thr	Ala	Gly
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Thr	Cys	Gly	Val	Ser	Asp	Asp	Ser	Leu	Gly	Ser	Leu	Leu	Gly	Pro
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Arg	Thr	Ala	Ala	Val	Phe	Arg	Pro	Arg	Pro	Gly	Asp	Ser	Leu	Pro
			185					190					195		
Ser	Arg	Glu	Thr	Arg	Tyr	Val	Glu	Leu	Tyr	Val	Val	Val	Asp	Asn

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Ala Glu Phe Gln Met Leu Gly Ser Glu Ala Ala Val Arg His Arg
215 220 225

Val Leu Glu Val Val Asn His Val Asp Lys Leu Tyr Gln Lys Leu
230 235 240

Asn Phe Arg Val Val Leu Val Gly Leu Glu Ile Trp Asn Ser Gln
245 250 255

Asp Arg Phe His Val Ser Pro Asp Pro Ser Val Thr Leu Glu Asn
260 265 270

Leu Leu Thr Trp Gln Ala Arg Gln Arg Thr Arg Arg His Leu His
275 280 285

Asp Asn Val Gln Leu Ile Thr Gly Val Asp Phe Thr Gly Thr Thr
290 295 300

Val Gly Phe Ala Arg Val Ser Ala Met Cys Ser His Ser Ser Gly
305 310 315

Ala Val Asn Gln Asp His Ser Lys Asn Pro Val Gly Val Ala Cys
320 325 330

Thr Met Ala His Glu Met Gly His Asn Leu Gly Met Asp His Asp
335 340 345

Glu Asn Val Gln Gly Cys Arg Cys Gln Glu Arg Phe Glu Ala Gly
350 355 360

Arg Cys Ile Met Ala Gly Ser Ile Gly Ser Ser Phe Pro Arg Met
365 370 375

Phe Ser Asp Cys Ser Gln Ala Tyr Leu Glu Ser Phe Leu Glu Arg
380 385 390

Pro Gln Ser Val Cys Leu Ala Asn Ala Pro Asp Leu Ser His Leu
395 400 405

Val Gly Gly Pro Val Cys Gly Asn Leu Phe Val Glu Arg Gly Glu
410 415 420

Gln Cys Asp Cys Gly Pro Pro Glu Asp Cys Arg Asn Arg Cys Cys
425 430 435

Asn Ser Thr Thr Cys Gln Leu Ala Glu Gly Ala Gln Cys Ala His
440 445 450

Gly Thr Cys Cys Gln Glu Cys Lys Val Lys Pro Ala Gly Glu Leu
455 460 465

Cys Arg Pro Lys Lys Asp Met Cys Asp Leu Glu Glu Phe Cys Asp
470 475 480

Gly Arg His Pro Glu Cys Pro Glu Asp Ala Phe Gln Glu Asn Gly
485 490 495

Thr Pro Cys Ser Gly Gly Tyr Cys Tyr Asn Gly Ala Cys Pro Thr
500 505 510

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Ala Ser Arg Tyr Arg Ala Asp Met Cys Gly Val Leu Gln Cys Lys
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Gly Gly Gln Gln Pro Leu Gly Arg Ala Ile Cys Ile Val Asp Val
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Cys His Ala Leu Thr Thr Glu Asp Gly Thr Ala Tyr Glu Pro Val
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Pro Glu Gly Thr Arg Cys Gly Pro Glu Lys Val Cys Trp Lys Gly
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Arg Cys Gln Asp Leu His Val Tyr Arg Ser Ser Asn Cys Ser Ala
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Gln Cys His Asn His Gly Val Cys Asn His Lys Gln Glu Cys His
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Cys His Ala Gly Trp Ala Pro Pro His Cys Ala Lys Leu Leu Thr
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Glu Val His Ala Ala Ser Gly Ser Leu Pro Val Leu Val Val Val
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Val Leu Val Leu Leu Ala Val Val Leu Val Thr Leu Ala Gly Ile
                665                 670                 675

Ile Val Tyr Arg Lys Ala Arg Ser Arg Ile Leu Ser Arg Asn Val
                680                 685                 690

Ala Pro Lys Thr Thr Met Gly Arg Ser Asn Pro Leu Phe His Gln
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Ala Ala Ser Arg Val Pro Ala Lys Gly Gly Ala Pro Ala Pro Ser
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Arg Gly Pro Gln Glu Leu Val Pro Thr Thr His Pro Gly Gln Pro
                725                 730                 735

Ala Arg His Pro Ala Ser Ser Val Ala Leu Lys Arg Pro Pro Pro
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Ala Pro Pro Val Thr Val Ser Ser Pro Pro Phe Pro Val Pro Val
                755                 760                 765

Tyr Thr Arg Gln Ala Pro Lys Gln Val Ile Lys Pro Thr Phe Ala
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Pro Pro Val Pro Pro Val Lys Pro Gly Ala Gly Ala Ala Asn Pro
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Gly Pro Ala Glu Gly Ala Val Gly Pro Lys Val Ala Leu Lys Pro
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815 820

<210> 7
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<212> DNA
<213> Homo sapien

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				95				100						105
Asp	Ser	Tyr	Ser	Glu	Asp	Ala	Lys	Val	Ser	Thr	Leu	Lys	Asp	Ile
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Ile	Pro	His	Pro	Ser	Tyr	Leu	Gln	Glu	Gly	Ser	Gln	Gly	Asp	Ile
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Val Ser Arg Glu Ala Ile Leu Arg Phe Gly Phe Leu Gln Glu Phe
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Ser Lys Glu Glu Arg Asp Pro Val Lys Ala His Glu Gly Trp Gly
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Val Met Leu Pro Cys Asn Pro Pro Ala His Tyr Pro Gly Leu Ser
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Tyr Arg Trp Leu Leu Asn Glu Phe Pro Asn Phe Ile Pro Thr Asp
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Gly Arg His Phe Val Ser Gln Thr Thr Gly Asn Leu Tyr Ile Ala
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Arg Thr Asn Ala Ser Asp Leu Gly Asn Tyr Ser Cys Leu Ala Thr
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Gln Val Thr Leu Glu Cys Phe Ala Phe Gly Asn Pro Val Pro Arg
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Ile Lys Trp Arg Lys Val Asp Gly Ser Leu Ser Pro Gln Trp Thr
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Thr Ala Glu Pro Thr Leu Gln Ile Pro Ser Val Ser Phe Glu Asp
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Glu Gly Thr Tyr Glu Cys Glu Ala Glu Asn Ser Lys Gly Arg Asp
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Thr Val Gln Gly Arg Ile Ile Val Gln Ala Gln Pro Glu Trp Leu
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Lys Val Ile Ser Asp Thr Glu Ala Asp Ile Gly Ser Asn Leu Arg
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Gly Met Tyr Gln Cys Val Ala Glu Asn Lys His Gly Thr Ile Tyr
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Ile Leu Ile Pro Cys Gln Pro Arg Ala Ala Pro Lys Ala Val Val
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Ser Asp Glu Gly Lys Tyr Thr Cys Phe Ala Glu Asn Phe Met Gly
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Lys Ala Asn Ser Thr Gly Ile Leu Ser Val Arg Asp Ala Thr Lys
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Pro Gly Gly His Tyr Arg Arg Thr Asn Val Lys Glu Thr Ile Gly
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cgactttata cagaactgaa ttaagttatt gatttttgta ataaaaggta 1150

tgaaacacta aaaaaaaa 1168

<210> 12
<211> 257
<212> PRT
<213> Homo sapien

<400> 12

Met	Ser	Thr	Ser	Gln	Pro	Gly	Ala	Cys	Pro	Cys	Gln	Gly	Ala	Ala	
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				20					25						30
Ala	Val	Pro	Arg	Pro	Arg	Ser	Arg	Cys	Leu	Cys	Arg	Gln	His	Arg	
				35					40						45
Pro	Val	Gln	Leu	Cys	Ala	Pro	His	Arg	Thr	Cys	Arg	Glu	Ala	Leu	
				50					55						60
Asp	Val	Leu	Ala	Lys	Thr	Val	Ala	Phe	Leu	Arg	Asn	Leu	Pro	Ser	
				65					70						75
Phe	Trp	Gln	Leu	Pro	Pro	Gln	Asp	Gln	Arg	Arg	Leu	Leu	Gln	Gly	
				80					85						90
Cys	Trp	Gly	Pro	Leu	Phe	Leu	Leu	Gly	Leu	Ala	Gln	Asp	Ala	Val	
				95					100						105
Thr	Phe	Glu	Val	Ala	Glu	Ala	Pro	Val	Pro	Ser	Ile	Leu	Lys	Lys	
				110					115						120
Ile	Leu	Leu	Glu	Glu	Pro	Ser	Ser	Ser	Gly	Gly	Ser	Gly	Gln	Leu	
				125					130						135
Pro	Asp	Arg	Pro	Gln	Pro	Ser	Leu	Ala	Ala	Val	Gln	Trp	Leu	Gln	
				140					145						150
Cys	Cys	Leu	Glu	Ser	Phe	Trp	Ser	Leu	Glu	Leu	Ser	Pro	Lys	Glu	
				155					160						165
Tyr	Ala	Cys	Leu	Lys	Gly	Thr	Ile	Leu	Phe	Asn	Pro	Asp	Val	Pro	
				170					175						180
Gly	Leu	Gln	Ala	Ala	Ser	His	Ile	Gly	His	Leu	Gln	Gln	Glu	Ala	
				185					190						195
His	Trp	Val	Leu	Cys	Glu	Val	Leu	Glu	Pro	Trp	Cys	Pro	Ala	Ala	
				200					205						210
Gln	Gly	Arg	Leu	Thr	Arg	Val	Leu	Leu	Thr	Ala	Ser	Thr	Leu	Lys	

215 220 225

Ser Ile Pro Thr Ser Leu Leu Gly Asp Leu Phe Phe Arg Pro Ile
230 235 240

Ile Gly Asp Val Asp Ile Ala Gly Leu Leu Gly Asp Met Leu Leu
245 250 255

Leu Arg

<210> 13
<211> 1998
<212> DNA
<213> Homo sapien

<400> 13
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accccggccg tgccccccta cgtgaagctt ggcctcaccg tcgtctacac 200

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caaagacttc gtggcggcca attcgctcag ccccttcgtc ttctggctgc 400

tctactgctt ccctgtgtgc ctgcagtttt tcaccctcac gctgatgaac 450

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attactcaaa taccggttgc ccctctacct ggcctccctc ttcatcagcc 550

ttgttttcct gttggtgaat ttaacctgtg ctgtgctggt aaagacggga 600

aattgggaga ggaaggttat cgtctctgtg cgagtggcca ttaatgacac 650

gctcttcgtg ctgtgtgccg tctctctctc catctgtctc tacaaaatct 700

ctaagatgtc cttagccaac atttacttgg agtccaaggg ctcctccgtg 750

tgtcaagtga ctgccatcgg tgtcaccgtg atactgcttt acacctctcg 800

ggcctgctac aacctgttca tcctgtcatt ttctcagaac aagagcgtcc 850

attcctttga ttatgactgg tacaatgtat cagaccaggc agatttgaag 900

aatcagctgg gagatgctgg atacgtatta tttggagtgg tgttatttgt 950

ttgggaactc ttacctacca ccttagtcgt ttatttcttc cgagttagaa 1000

atcctacaaa ggaccttacc aaccctggaa tggtccccag ccatggattc 1050

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tgaccttgcc tggaacattg cccctcaggg acttcaggga ggttttgctc 1150

cagattacta tgattgggga caacaaacta acagcttcct ggcacaagca 1200

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gcatcagtta acagttttat ggacgattcc tcagatgaaa agcttcagaa 1300

aagcatagtg acagctgaat ttttagggca cttttcctta agaaatagaa 1350

cttgattttt atttgttaca ggtttccaat ggccccatag gaataagcaa 1400

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atttcagtgg gtataattta aacttttaa agaaaatctg tacttttata 1500

aagatgtatt ttgtataact taaataataa tgctaaagta tactagggtt 1550

ttttttctt gagaatgtta ctgcaatcat gttgtagttt gcacagactt 1600

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taaagctttt ggactaaagt attccacaaa tcttacctct ttaggtcact 1700

gatggtcact ccgattctga gtgccacatt ggtagactcc taaaatacag 1750

ttgacaactt agccaattgc aactccagtg ttgataatta aaatgaaatg 1800

gtaaagcagc agactgtaag gtctttagag attttttttt aaggttcagg 1850

ccgtaggttc ctcaaggaat ctcttaagtt ttgcccaaag actggtactt 1900

cctttcagta gggcgctaat gtatacacat taatgataag ttgataacat 1950

taaaaatgta gctgacttat cctattaaac ctcctctgct atgttcac 1998

<210> 14
<211> 399
<212> PRT
<213> Homo sapien

<400> 14

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Met Glu Thr Pro Pro Trp Asp Pro Ala Arg Asn Asp Ser Leu Pro
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Pro Thr Leu Thr Pro Ala Val Pro Pro Tyr Val Lys Leu Gly Leu
35 40 45

Thr Val Val Tyr Thr Val Phe Tyr Ala Leu Leu Phe Val Phe Ile
50 55 60

Tyr Val Gln Leu Trp Leu Val Leu Arg Tyr Arg His Lys Arg Leu
65 70 75

Ser Tyr Gln Ser Val Phe Leu Phe Leu Cys Leu Phe Trp Ala Ser
80 85 90

Leu Arg Thr Val Leu Phe Ser Phe Tyr Phe Lys Asp Phe Val Ala

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                 95                  100                 105

Ala Asn Ser Leu Ser Pro Phe Val Phe Trp Leu Leu Tyr Cys Phe
                110                 115                 120

Pro Val Cys Leu Gln Phe Phe Thr Leu Thr Leu Met Asn Leu Tyr
                125                 130                 135

Phe Thr Gln Val Ile Phe Lys Ala Lys Ser Lys Tyr Ser Pro Glu
                140                 145                 150

Leu Leu Lys Tyr Arg Leu Pro Leu Tyr Leu Ala Ser Leu Phe Ile
                155                 160                 165

Ser Leu Val Phe Leu Leu Val Asn Leu Thr Cys Ala Val Leu Val
                170                 175                 180

Lys Thr Gly Asn Trp Glu Arg Lys Val Ile Val Ser Val Arg Val
                185                 190                 195

Ala Ile Asn Asp Thr Leu Phe Val Leu Cys Ala Val Ser Leu Ser
                200                 205                 210

Ile Cys Leu Tyr Lys Ile Ser Lys Met Ser Leu Ala Asn Ile Tyr
                215                 220                 225

Leu Glu Ser Lys Gly Ser Ser Val Cys Gln Val Thr Ala Ile Gly
                230                 235                 240

Val Thr Val Ile Leu Leu Tyr Thr Ser Arg Ala Cys Tyr Asn Leu
                245                 250                 255

Phe Ile Leu Ser Phe Ser Gln Asn Lys Ser Val His Ser Phe Asp
                260                 265                 270

Tyr Asp Trp Tyr Asn Val Ser Asp Gln Ala Asp Leu Lys Asn Gln
                275                 280                 285

Leu Gly Asp Ala Gly Tyr Val Leu Phe Gly Val Val Leu Phe Val
                290                 295                 300

Trp Glu Leu Leu Pro Thr Thr Leu Val Val Tyr Phe Phe Arg Val
                305                 310                 315

Arg Asn Pro Thr Lys Asp Leu Thr Asn Pro Gly Met Val Pro Ser
                320                 325                 330

His Gly Phe Ser Pro Arg Ser Tyr Phe Phe Asp Asn Pro Arg Arg
                335                 340                 345

Tyr Asp Ser Asp Asp Asp Leu Ala Trp Asn Ile Ala Pro Gln Gly
                350                 355                 360

Leu Gln Gly Gly Phe Ala Pro Asp Tyr Tyr Asp Trp Gly Gln Gln
                365                 370                 375

Thr Asn Ser Phe Leu Ala Gln Ala Gly Thr Leu Gln Asp Ser Thr
                380                 385                 390

Leu Asp Pro Asp Lys Pro Ser Leu Gly
                395
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<210> 15
<211> 2320
<212> DNA
<213> Homo sapien

<400> 15
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gtgtactgct ccttggccaa gagaggccat ttcaatcgaa tatctcatgg 150

cctacaggga ctttctgcag tgcctctgag aacttacgca gatcagccga 200

ttgatgctga tgtaacagtt ataggttctg gtcctggagg atatgttgct 250

gctattaaag ctgcccagtt aggcttcaag acagtctgca ttgagaaaaa 300

tgaaacactt ggtggaacat gcttgaatgt tggttgtatt ccttctaagg 350

ctttattgaa caactctcat tattaccata tggcccatgg aacagatttt 400

gcatctagag gaattgaaat gtccgaagtt cgcttgaatt tagacaagat 450

gatggagcag aagagtactg cagtaaaagc tttaacaggt ggaattgccc 500

acttattcaa acagaataag gttgttcatg tcaatggata tggaaagata 550

actggcaaaa atcaagtcac tgctacgaaa gctgatggcg gcactcaggt 600

tattgataca aagaacattc ttatagccac gggttcagaa gttactcctt 650

ttcctggaat cacgatagat gaagatacaa tagtgtcatc tacaggtgct 700

ttatctttaa aaaaagttcc agaaaagatg gttgttattg gtgcaggagt 750

aataggtgta gaattgggtt cagtttggca aagacttggt gcagatgtga 800

cagcagttga atttttaggt catgtaggtg gagttggaat tgatatggag 850

atatctaaaa actttcaacg catccttcaa aaacaggggt ttaaatttaa 900

attgaataca aaggttactg gtgctaccaa gaagtcagat ggaaaaattg 950

atgtttctat tgaagctgct tctggtggta aagctgaagt tatcacttgt 1000

gatgtactct tggtttgcat tggccgacga ccctttacta agaatttggg 1050

actagaagag ctgggaattg aactagatcc tagaggtaga attccagtca 1100

ataccagatt tcaaactaaa attccaaata tctatgccat tggtgatgta 1150

gttgctggtc caatgctggc tcacaaagca gaggatgaag gcattatctg 1200

tgttgaagga atggctggtg gtgctgtgca cattgactac aattgtgtgc 1250

catcagtgat ttacacacac cctgaagttg cttgggttgg caaatcagaa 1300

gagcagttga aagaagaggg tattgagtac aaagttggga aattcccatt 1350

tgctgctaac agcagagcta agacaaatgc tgacacagat ggcatggtga 1400

agatccttgg gcagaaatcg acagacagag tactgggagc acatattctt 1450

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tggacaaaat ggaatactct tatatctata ttttacataa atttagtatt 1800

ttgtttcagt gcactaatat gtaagacaaa aaggactact tattgtagtc 1850

atcctggaat atctccgtca actcatattt tcatgctgtt catgaaagat 1900

tcaatgcccc tgaatttaaa tagctctttt ctctgataca gaaaagttga 1950

attttacatg gctggagcta gaatttgata tgtgaacagt tgtgtttgaa 2000

gcacagtgat caagttattt ttaatttggt tttcacattg gaaacaagtc 2050

agtcattcag atatgattca aatgtctata aaccaaactg atgtaagtaa 2100

atggtctctc acttgtttta tttaacctct aaattctttc attttagggg 2150

tagcatttgt gttgaagagg ttttaaagct tccattgttg tctgcaactc 2200

tgaagggtaa ttatatagtt acccaaatta agagagtcta tttacggaac 2250

tcaaatacgt gggcattcaa atgtattaca gtggggaatg aagatactga 2300

aataaacgtc ttaaatattc 2320

<210> 16
<211> 509
<212> PRT
<213> Homo sapien

<400> 16

Met	Gln	Ser	Trp	Ser	Arg	Val	Tyr	Cys	Ser	Leu	Ala	Lys	Arg	Gly
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His	Phe	Asn	Arg	Ile	Ser	His	Gly	Leu	Gln	Gly	Leu	Ser	Ala	Val
				20				25					30	
Pro	Leu	Arg	Thr	Tyr	Ala	Asp	Gln	Pro	Ile	Asp	Ala	Asp	Val	Thr
				35				40					45	
Val	Ile	Gly	Ser	Gly	Pro	Gly	Gly	Tyr	Val	Ala	Ala	Ile	Lys	Ala
				50				55					60	
Ala	Gln	Leu	Gly	Phe	Lys	Thr	Val	Cys	Ile	Glu	Lys	Asn	Glu	Thr
				65				70					75	

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Leu Gly Gly Thr Cys Leu Asn Val Gly Cys Ile Pro Ser Lys Ala
 80                  85                  90

Leu Leu Asn Asn Ser His Tyr Tyr His Met Ala His Gly Thr Asp
 95                 100                 105

Phe Ala Ser Arg Gly Ile Glu Met Ser Glu Val Arg Leu Asn Leu
110                 115                 120

Asp Lys Met Met Glu Gln Lys Ser Thr Ala Val Lys Ala Leu Thr
125                 130                 135

Gly Gly Ile Ala His Leu Phe Lys Gln Asn Lys Val Val His Val
140                 145                 150

Asn Gly Tyr Gly Lys Ile Thr Gly Lys Asn Gln Val Thr Ala Thr
155                 160                 165

Lys Ala Asp Gly Gly Thr Gln Val Ile Asp Thr Lys Asn Ile Leu
170                 175                 180

Ile Ala Thr Gly Ser Glu Val Thr Pro Phe Pro Gly Ile Thr Ile
185                 190                 195

Asp Glu Asp Thr Ile Val Ser Ser Thr Gly Ala Leu Ser Leu Lys
200                 205                 210

Lys Val Pro Glu Lys Met Val Val Ile Gly Ala Gly Val Ile Gly
215                 220                 225

Val Glu Leu Gly Ser Val Trp Gln Arg Leu Gly Ala Asp Val Thr
230                 235                 240

Ala Val Glu Phe Leu Gly His Val Gly Gly Val Gly Ile Asp Met
245                 250                 255

Glu Ile Ser Lys Asn Phe Gln Arg Ile Leu Gln Lys Gln Gly Phe
260                 265                 270

Lys Phe Lys Leu Asn Thr Lys Val Thr Gly Ala Thr Lys Lys Ser
275                 280                 285

Asp Gly Lys Ile Asp Val Ser Ile Glu Ala Ala Ser Gly Gly Lys
290                 295                 300

Ala Glu Val Ile Thr Cys Asp Val Leu Leu Val Cys Ile Gly Arg
305                 310                 315

Arg Pro Phe Thr Lys Asn Leu Gly Leu Glu Glu Leu Gly Ile Glu
320                 325                 330

Leu Asp Pro Arg Gly Arg Ile Pro Val Asn Thr Arg Phe Gln Thr
335                 340                 345

Lys Ile Pro Asn Ile Tyr Ala Ile Gly Asp Val Val Ala Gly Pro
350                 355                 360

Met Leu Ala His Lys Ala Glu Asp Glu Gly Ile Ile Cys Val Glu
365                 370                 375

Gly Met Ala Gly Gly Ala Val His Ile Asp Tyr Asn Cys Val Pro
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380 385 390

Ser Val Ile Tyr Thr His Pro Glu Val Ala Trp Val Gly Lys Ser
395 400 405

Glu Glu Gln Leu Lys Glu Glu Gly Ile Glu Tyr Lys Val Gly Lys
410 415 420

Phe Pro Phe Ala Ala Asn Ser Arg Ala Lys Thr Asn Ala Asp Thr
425 430 435

Asp Gly Met Val Lys Ile Leu Gly Gln Lys Ser Thr Asp Arg Val
440 445 450

Leu Gly Ala His Ile Leu Gly Pro Gly Ala Gly Glu Met Val Asn
455 460 465

Glu Ala Ala Leu Ala Leu Glu Tyr Gly Ala Ser Cys Glu Asp Ile
470 475 480

Ala Arg Val Cys His Ala His Pro Thr Leu Ser Glu Ala Phe Arg
485 490 495

Glu Ala Asn Leu Ala Ala Ser Phe Gly Lys Ser Ile Asn Phe
500 505

<210> 17
<211> 2090
<212> DNA
<213> Homo sapien

<400> 17
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cggcgggcat ggtggggcgg gagaaagagc tctctataca ctttgttccc 150

gggagctgtc ggctggtgga ggaggaagtt aacatcccta ataggagggt 200

tctggttact ggtgccactg ggcttcttgg cagagctgta cacaaagaat 250

ttcagcagaa taattggcat gcagttggct gtggtttcag aagagcaaga 300

ccaaaatttg aacaggttaa tctgttggat tctaatgcag ttcatcacat 350

cattcatgat tttcagcccc atgttatagt acattgtgca gcagagagaa 400

gaccagatgt tgtagaaaat cagccagatg ctgcctctca acttaatgtg 450

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gagaggaaga cataccagct cccctaaatt tgtatggcaa aacaaaatta 600

gatggagaaa aggctgtcct ggagaacaat ctaggagctg ctgttttgag 650

gattcctatt ctgtatgggg aagttgaaaa gctcgaagaa agtgctgtga 700

ctgttatgtt tgataaagtg cagttcagca acaagtcagc aaacatggat 750

cactggcagc agaggttccc cacacatgtc aaagatgtgg ccactgtgtg 800

ccggcagcta gcagagaaga gaatgctgga tccatcaatt aagggaacct 850

ttcactggtc tggcaatgaa cagatgacta agtatgaaat ggcatgtgca 900

attgcagatg ccttcaacct ccccagcagt cacttaagac ctattactga 950

cagccctgtc ctaggagcac aacgtccgag aaatgctcag cttgactgct 1000

ccaaattgga gaccttgggc attggccaac gaacaccatt tcgaattgga 1050

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acagcttgat gcctcctgct tttatagcag tttatgggga gcacttgaaa 1700

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agtcttttca ccattcatga ataataataa atatgtactg ctggcatgta 1900

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aaataaaaca caataaaatt aaaaaaaaaa aaaaaaaaaa 2090

<210> 18
<211> 334
<212> PRT
<213> Homo sapien

<400> 18

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 1               5                  10                  15

Ser Cys Arg Leu Val Glu Glu Glu Val Asn Ile Pro Asn Arg Arg
            20                  25                  30

Val Leu Val Thr Gly Ala Thr Gly Leu Leu Gly Arg Ala Val His
            35                  40                  45

Lys Glu Phe Gln Gln Asn Asn Trp His Ala Val Gly Cys Gly Phe
            50                  55                  60

Arg Arg Ala Arg Pro Lys Phe Glu Gln Val Asn Leu Leu Asp Ser
            65                  70                  75

Asn Ala Val His His Ile Ile His Asp Phe Gln Pro His Val Ile
            80                  85                  90

Val His Cys Ala Ala Glu Arg Arg Pro Asp Val Val Glu Asn Gln
            95                 100                 105

Pro Asp Ala Ala Ser Gln Leu Asn Val Asp Ala Ser Gly Asn Leu
           110                 115                 120

Ala Lys Glu Ala Ala Ala Val Gly Ala Phe Leu Ile Tyr Ile Ser
           125                 130                 135

Ser Asp Tyr Val Phe Asp Gly Thr Asn Pro Pro Tyr Arg Glu Glu
           140                 145                 150

Asp Ile Pro Ala Pro Leu Asn Leu Tyr Gly Lys Thr Lys Leu Asp
           155                 160                 165

Gly Glu Lys Ala Val Leu Glu Asn Asn Leu Gly Ala Ala Val Leu
           170                 175                 180

Arg Ile Pro Ile Leu Tyr Gly Glu Val Glu Lys Leu Glu Glu Ser
           185                 190                 195

Ala Val Thr Val Met Phe Asp Lys Val Gln Phe Ser Asn Lys Ser
           200                 205                 210

Ala Asn Met Asp His Trp Gln Gln Arg Phe Pro Thr His Val Lys
           215                 220                 225

Asp Val Ala Thr Val Cys Arg Gln Leu Ala Glu Lys Arg Met Leu
           230                 235                 240

Asp Pro Ser Ile Lys Gly Thr Phe His Trp Ser Gly Asn Glu Gln
           245                 250                 255

Met Thr Lys Tyr Glu Met Ala Cys Ala Ile Ala Asp Ala Phe Asn
           260                 265                 270

Leu Pro Ser Ser His Leu Arg Pro Ile Thr Asp Ser Pro Val Leu
           275                 280                 285

Gly Ala Gln Arg Pro Arg Asn Ala Gln Leu Asp Cys Ser Lys Leu
           290                 295                 300

Glu Thr Leu Gly Ile Gly Gln Arg Thr Pro Phe Arg Ile Gly Ile
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305 310 315

Lys Glu Ser Leu Trp Pro Phe Leu Ile Asp Lys Arg Trp Arg Gln
320 325 330

Thr Val Phe His

<210> 19
<211> 2380
<212> DNA
<213> Homo sapien

<400> 19
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agcggcgaag gaggaagagg aggaggagga agaggggagc acaaaggatc 100

caggtctccc gacgggaggt taataccaag aaccatgtgt gccgagcggc 150

tgggccagtt catgaccctg gctttggtgt tggccacctt tgacccggcg 200

cgggggaccg acgccaccaa cccacccgag ggtccccaag acaggagctc 250

ccagcagaaa ggccgcctgt ccctgcagaa tacagcggag atccagcact 300

gtttggtcaa cgctggcgat gtggggtgtg gcgtgtttga atgtttcgag 350

aacaactctt gtgagattcg gggcttacat gggatttgca tgacttttct 400

gcacaacgct ggaaaatttg atgcccaggg caagtcattc atcaaagacg 450

ccttgaaatg taaggcccac gctctgcggc acaggttcgg ctgcataagc 500

cggaagtgcc cggccatcag ggaaatggtg tcccagttgc agcgggaatg 550

ctacctcaag cacgacctgt gcgcggctgc ccaggagaac acccgggtga 600

tagtggagat gatccatttc aaggacttgc tgctgcacga accctacgtg 650

gacctcgtga acttgctgct gacctgtggg gaggaggtga aggaggccat 700

cacccacagc gtgcaggttc agtgtgagca gaactgggga agcctgtgct 750

ccatcttgag cttctgcacc tcggccatcc agaagcctcc cacggcgccc 800

cccgagcgcc agccccaggt ggacagaacc aagctctcca gggcccacca 850

cggggaagca ggacatcacc tcccagagcc cagcagtagg gagactggcc 900

gaggtgccaa gggtgagcga ggtagcaaga gccacccaaa cgcccatgcc 950

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ctgtggggac tgtggacttc atcgaggtgt gtgttcgcgg aacggacagg 1200

tgagatggag acccctgggg ccgtggggtc tcaggggtgc ctggtgaatt 1250

ctgcacttac acgtactcaa gggagcgcgc ccgcgttatc ctcgtacctt 1300

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acatctgact gcctgacatg gactcctgcc cacttggggg aaaccttata 2000

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gatttcgtta tctcaccttg accctcagcc aagattggta aagctgcgtc 2100

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gatgggaaag gaaagaagag aatgaagact acttagtaat tcccatcagg 2200

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ggacaggatt ttccagatcc taattggaaa tttagcaata aggagaggag 2300

tccaagggga caaataaagg cagagagaga gagagagaga gggagaggaa 2350

gaaaagagag agagaaaaga gcctcgtgcc 2380

<210> 20
<211> 302
<212> PRT
<213> Homo sapien

<400> 20

Met	Cys	Ala	Glu	Arg	Leu	Gly	Gln	Phe	Met	Thr	Leu	Ala	Leu	Val
1				5				10					15	

Leu	Ala	Thr	Phe	Asp	Pro	Ala	Arg	Gly	Thr	Asp	Ala	Thr	Asn	Pro
				20					25					30

```
Pro Glu Gly Pro Gln Asp Arg Ser Ser Gln Gln Lys Gly Arg Leu
                35                  40                  45

Ser Leu Gln Asn Thr Ala Glu Ile Gln His Cys Leu Val Asn Ala
                50                  55                  60

Gly Asp Val Gly Cys Gly Val Phe Glu Cys Phe Glu Asn Asn Ser
                65                  70                  75

Cys Glu Ile Arg Gly Leu His Gly Ile Cys Met Thr Phe Leu His
                80                  85                  90

Asn Ala Gly Lys Phe Asp Ala Gln Gly Lys Ser Phe Ile Lys Asp
                95                  100                 105

Ala Leu Lys Cys Lys Ala His Ala Leu Arg His Arg Phe Gly Cys
                110                 115                 120

Ile Ser Arg Lys Cys Pro Ala Ile Arg Glu Met Val Ser Gln Leu
                125                 130                 135

Gln Arg Glu Cys Tyr Leu Lys His Asp Leu Cys Ala Ala Ala Gln
                140                 145                 150

Glu Asn Thr Arg Val Ile Val Glu Met Ile His Phe Lys Asp Leu
                155                 160                 165

Leu Leu His Glu Pro Tyr Val Asp Leu Val Asn Leu Leu Leu Thr
                170                 175                 180

Cys Gly Glu Glu Val Lys Glu Ala Ile Thr His Ser Val Gln Val
                185                 190                 195

Gln Cys Glu Gln Asn Trp Gly Ser Leu Cys Ser Ile Leu Ser Phe
                200                 205                 210

Cys Thr Ser Ala Ile Gln Lys Pro Pro Thr Ala Pro Pro Glu Arg
                215                 220                 225

Gln Pro Gln Val Asp Arg Thr Lys Leu Ser Arg Ala His His Gly
                230                 235                 240

Glu Ala Gly His His Leu Pro Glu Pro Ser Ser Arg Glu Thr Gly
                245                 250                 255

Arg Gly Ala Lys Gly Glu Arg Gly Ser Lys Ser His Pro Asn Ala
                260                 265                 270

His Ala Arg Gly Arg Val Gly Gly Leu Gly Ala Gln Gly Pro Ser
                275                 280                 285

Gly Ser Ser Glu Trp Glu Asp Glu Gln Ser Glu Tyr Ser Asp Ile
                290                 295                 300

Arg Arg
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<210> 21
<211> 2516
<212> DNA
<213> Homo sapien

<400> 21
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gcgtcatccc agctgaggag gagaacccgg ccttctggaa ccgccaggca 150

gctgaggccc tggatgctgc caagaagctg cagcccatcc agaaggtcgc 200

caagaacctc atcctcttcc tgggcgatgg gttgggggtg cccacggtga 250

cagccaccag gatcctaaag gggcagaaga atggcaaact ggggcctgag 300

acgcccctgg ccatggaccg cttcccatac ctggctctgt ccaagacata 350

caatgtggac agacaggtgc cagacagcgc agccacagcc acggcctacc 400

tgtgcggggt caaggccaac ttccagacca tcggcttgag tgcagccgcc 450

cgctttaacc agtgcaacac gacacgcggc aatgaggtca tctccgtgat 500

gaaccgggcc aagcaagcag gaaagtcagt aggagtggtg accaccacac 550

gggtgcagca cgcctcgcca gccggcacct acgcacacac agtgaaccgc 600

aactggtact cagatgctga catgcctgcc tcagcccgcc aggaggggtg 650

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gcaggcctgg acccagagac gtcccccatc gtgggacacg acacacccag 2050

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caaggacttg ggtggatcag gacacctgaa gaagagaagc ttccggcaac 2150

cctgcaaccc acccaaggag gctactggat cggggattcc caggggggct 2200

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ctcccgggac atctggatgc tgggcataga tttctcaaca aggaagactc 2450

ccctgcctcc tcaaggtctc cattctccta ggagacaaag caataataaa 2500

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<210> 22
<211> 528
<212> PRT
<213> Homo sapien

<400> 22

Met	Gln	Gly	Pro	Trp	Val	Leu	Leu	Leu	Leu	Gly	Leu	Arg	Leu	Gln	
1				5				10						15	
Leu	Ser	Leu	Gly	Val	Ile	Pro	Ala	Glu	Glu	Glu	Asn	Pro	Ala	Phe	
				20				25						30	
Trp	Asn	Arg	Gln	Ala	Ala	Glu	Ala	Leu	Asp	Ala	Ala	Lys	Lys	Leu	
				35				40						45	
Gln	Pro	Ile	Gln	Lys	Val	Ala	Lys	Asn	Leu	Ile	Leu	Phe	Leu	Gly	
				50				55						60	

```
Asp Gly Leu Gly Val Pro Thr Val Thr Ala Thr Arg Ile Leu Lys
                  65                  70                  75

Gly Gln Lys Asn Gly Lys Leu Gly Pro Glu Thr Pro Leu Ala Met
                  80                  85                  90

Asp Arg Phe Pro Tyr Leu Ala Leu Ser Lys Thr Tyr Asn Val Asp
                  95                 100                 105

Arg Gln Val Pro Asp Ser Ala Ala Thr Ala Thr Ala Tyr Leu Cys
                 110                 115                 120

Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu Ser Ala Ala Ala
                 125                 130                 135

Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu Val Ile Ser
                 140                 145                 150

Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly Val Val
                 155                 160                 165

Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr Ala
                 170                 175                 180

His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                 185                 190                 195

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile
                 200                 205                 210

Ser Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr
                 215                 220                 225

Met Phe Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala
                 230                 235                 240

Ser Gln Asn Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu
                 245                 250                 255

Trp Leu Ala Lys His Gln Gly Ala Trp Tyr Val Trp Asn Arg Thr
                 260                 265                 270

Glu Leu Met Gln Ala Ser Leu Asp Gln Ser Val Thr His Leu Met
                 275                 280                 285

Gly Leu Phe Glu Pro Gly Asp Thr Lys Tyr Glu Ile Leu Arg Asp
                 290                 295                 300

Pro Thr Leu Asp Pro Ser Leu Met Glu Met Thr Glu Ala Ala Leu
                 305                 310                 315

Arg Leu Leu Ser Arg Asn Pro Arg Gly Phe Tyr Leu Phe Val Glu
                 320                 325                 330

Gly Gly Arg Ile Asp His Gly His His Glu Gly Val Ala Tyr Gln
                 335                 340                 345

Ala Val Thr Glu Ala Val Met Phe Asp Asp Ala Ile Glu Arg Ala
                 350                 355                 360

Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr Leu Val Thr Ala
```

365 370 375

Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr Leu Arg Gly
380 385 390

Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp Ser Lys
395 400 405

Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val Phe
410 415 420

Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
425 430 435

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Ser Glu Thr
440 445 450

His Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala
455 460 465

His Leu Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val
470 475 480

Met Ala Phe Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu
485 490 495

Ala Leu Pro Ala Cys Thr Thr Asp Ala Ala His Pro Val Ala Ala
500 505 510

Ser Leu Pro Leu Leu Ala Gly Thr Leu Leu Leu Leu Gly Ala Ser
515 520 525

Ala Ala Pro

<210> 23
<211> 1746
<212> DNA
<213> Homo sapien

<400> 23
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cgggggatgt gggcagcggc cgtggtcctg tcagtggcca ccttcctcta 200

ccaggtggct gagagggtgc gctactacag ggagttccac caccagactg 250

ccctggatga gcgagaaagc caccggctca tcttcccggc tgtcaccctg 300

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tcctgcgcgc cctgggccgg ccccctgcac cgcccggctt catgcccagt 450

cccacctttg acatggcgca actctatgcc cgtgctgggc actccctgga 500

tgacatgctg ctggactgtc gcttccgtgg ccaaccttgt gggcctgaga 550

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gccctgacat cctggacatg cctagcctgc acgtagcttt tccgtcttca 1700

ccccaaataa agtcctaatg catcaaaaaa aaaaaaaaaa aaaaaa 1746

<210> 24
<211> 531
<212> PRT
<213> Homo sapien

<400> 24

Met Lys Pro Thr Ser Gly Pro Glu Glu Ala Arg Arg Pro Ala Ser
1 5 10 15

Asp Ile Arg Val Phe Ala Ser Asn Cys Ser Met His Gly Leu Gly
20 25 30

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His Val Phe Gly Pro Gly Ser Leu Ser Leu Arg Arg Gly Met Trp
                35                  40                  45

Ala Ala Ala Val Val Leu Ser Val Ala Thr Phe Leu Tyr Gln Val
                50                  55                  60

Ala Glu Arg Val Arg Tyr Tyr Arg Glu Phe His His Gln Thr Ala
                65                  70                  75

Leu Asp Glu Arg Glu Ser His Arg Leu Ile Phe Pro Ala Val Thr
                80                  85                  90

Leu Cys Asn Ile Asn Pro Leu Arg Arg Ser Arg Leu Thr Pro Asn
                95                  100                 105

Asp Leu His Trp Ala Gly Ser Ala Leu Leu Gly Leu Asp Pro Ala
                110                 115                 120

Glu His Ala Ala Phe Leu Arg Ala Leu Gly Arg Pro Pro Ala Pro
                125                 130                 135

Pro Gly Phe Met Pro Ser Pro Thr Phe Asp Met Ala Gln Leu Tyr
                140                 145                 150

Ala Arg Ala Gly His Ser Leu Asp Asp Met Leu Leu Asp Cys Arg
                155                 160                 165

Phe Arg Gly Gln Pro Cys Gly Pro Glu Asn Phe Thr Thr Ile Phe
                170                 175                 180

Thr Arg Met Gly Lys Cys Tyr Thr Phe Asn Ser Gly Ala Asp Gly
                185                 190                 195

Ala Glu Leu Leu Thr Thr Thr Arg Gly Gly Met Gly Asn Gly Leu
                200                 205                 210

Asp Ile Met Leu Asp Val Gln Gln Glu Glu Tyr Leu Pro Val Trp
                215                 220                 225

Arg Asp Asn Glu Glu Thr Pro Phe Glu Val Gly Ile Arg Val Gln
                230                 235                 240

Ile His Ser Gln Glu Glu Pro Pro Ile Ile Asp Gln Leu Gly Leu
                245                 250                 255

Gly Val Ser Pro Gly Tyr Gln Thr Phe Val Ser Cys Gln Gln Gln
                260                 265                 270

Gln Leu Ser Phe Leu Pro Pro Pro Trp Gly Asp Cys Ser Ser Ala
                275                 280                 285

Ser Leu Asn Pro Asn Tyr Glu Pro Glu Pro Ser Asp Pro Leu Gly
                290                 295                 300

Ser Pro Ser Pro Ser Pro Ser Pro Pro Tyr Thr Leu Met Gly Cys
                305                 310                 315

Arg Leu Ala Cys Glu Thr Arg Tyr Val Ala Arg Lys Cys Gly Cys
                320                 325                 330
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Arg Met Val Tyr Met Pro Gly Asp Val Pro Val Cys Ser Pro Gln
335 340 345

Gln Tyr Lys Asn Cys Ala His Pro Ala Ile Asp Ala Met Leu Arg
350 355 360

Lys Asp Ser Cys Ala Cys Pro Asn Pro Cys Ala Ser Thr Arg Tyr
365 370 375

Ala Lys Glu Leu Ser Met Val Arg Ile Pro Ser Arg Ala Ala Ala
380 385 390

Arg Phe Leu Ala Arg Lys Leu Asn Arg Ser Glu Ala Tyr Ile Ala
395 400 405

Glu Asn Val Leu Ala Leu Asp Ile Phe Phe Glu Ala Leu Asn Tyr
410 415 420

Glu Thr Val Glu Gln Lys Lys Ala Tyr Glu Met Ser Glu Leu Leu
425 430 435

Gly Asp Ile Gly Gly Gln Met Gly Leu Phe Ile Gly Ala Ser Leu
440 445 450

Leu Thr Ile Leu Glu Ile Leu Asp Tyr Leu Cys Glu Val Phe Arg
455 460 465

Asp Lys Val Leu Gly Tyr Phe Trp Asn Arg Gln His Ser Gln Arg
470 475 480

His Ser Ser Thr Asn Leu Leu Gln Glu Gly Leu Gly Ser His Arg
485 490 495

Thr Gln Val Pro His Leu Ser Leu Gly Pro Arg Pro Pro Thr Pro
500 505 510

Pro Cys Ala Val Thr Lys Thr Leu Ser Ala Ser His Arg Thr Cys
515 520 525

Tyr Leu Val Thr Gln Leu
530

<210> 25
<211> 1104
<212> DNA
<213> Homo sapien

<400> 25
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ctgcttggtg ccagtcaagt ggggtggaaa ctgccagaag gaccgccagt 200

cccccatcaa catcgtcacc accaaggcaa aggtggacaa aaaactggga 250

cgcttcttct tctctggcta cgataagaag caaacgtgga ctgtccaaaa 300

taacgggcac tcagtgatga tgttgctgga gaacaaggcc agcatttctg 350

gaggaggact gcctgcccca taccaggcca aacagttgca cctgcactgg 400

tccgacttgc catataaggg ctcggagcac agcctcgatg gggagcactt 450

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ctggtggagg ctggaaccca ggtgaacgag ggcttccagc cactggtgga 600

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cgctacctgg gctcactcac cacaccgacc tgcgatgaga aggtcgtctg 750

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ggag 1104

<210> 26
<211> 312
<212> PRT
<213> Homo sapien

<400> 26

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Met Arg Met Leu Leu Ala Leu Leu Ala Leu Ser Ala Ala Arg Pro
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Ser Ala Ser Ala Glu Ser His Trp Cys Tyr Glu Val Gln Ala Glu
                20                  25                  30

Ser Ser Asn Tyr Pro Cys Leu Val Pro Val Lys Trp Gly Gly Asn
                35                  40                  45

Cys Gln Lys Asp Arg Gln Ser Pro Ile Asn Ile Val Thr Thr Lys
                50                  55                  60

Ala Lys Val Asp Lys Lys Leu Gly Arg Phe Phe Phe Ser Gly Tyr
                65                  70                  75

Asp Lys Lys Gln Thr Trp Thr Val Gln Asn Asn Gly His Ser Val
                80                  85                  90

Met Met Leu Leu Glu Asn Lys Ala Ser Ile Ser Gly Gly Gly Leu
                95                 100                 105

Pro Ala Pro Tyr Gln Ala Lys Gln Leu His Leu His Trp Ser Asp
```

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                110                 115                 120

Leu Pro Tyr Lys Gly Ser Glu His Ser Leu Asp Gly Glu His Phe
                125                 130                 135

Ala Met Glu Met His Ile Val His Glu Lys Glu Lys Gly Thr Ser
                140                 145                 150

Arg Asn Val Lys Glu Ala Gln Asp Pro Glu Asp Glu Ile Ala Val
                155                 160                 165

Leu Ala Phe Leu Val Glu Ala Gly Thr Gln Val Asn Glu Gly Phe
                170                 175                 180

Gln Pro Leu Val Glu Ala Leu Ser Asn Ile Pro Lys Pro Glu Met
                185                 190                 195

Ser Thr Thr Met Ala Glu Ser Ser Leu Leu Asp Leu Leu Pro Lys
                200                 205                 210

Glu Glu Lys Leu Arg His Tyr Phe Arg Tyr Leu Gly Ser Leu Thr
                215                 220                 225

Thr Pro Thr Cys Asp Glu Lys Val Val Trp Thr Val Phe Arg Glu
                230                 235                 240

Pro Ile Gln Leu His Arg Glu Gln Ile Leu Ala Phe Ser Gln Lys
                245                 250                 255

Leu Tyr Tyr Asp Lys Glu Gln Thr Val Ser Met Lys Asp Asn Val
                260                 265                 270

Arg Pro Leu Gln Gln Leu Gly Gln Arg Thr Val Ile Lys Ser Gly
                275                 280                 285

Ala Pro Gly Arg Pro Leu Pro Trp Ala Leu Pro Ala Leu Leu Gly
                290                 295                 300

Pro Met Leu Ala Cys Leu Leu Ala Gly Phe Leu Arg
                305                 310
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<210> 27
<211> 585
<212> DNA
<213> Homo sapien

<400> 27

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gggccgtgtg gcagttccgc aaaatgatca agtgcgtgat cccggggagt 150

gaccccttct tggaatacaa caactacggc tgctactgtg gcttgggggg 200

ctcaggcacc cccgtggatg aactggacaa gtgctgccag acacatgaca 250

actgctatga ccaggccaag aagctggaca gctgtaaatt tctgctggac 300

aacccgtaca cccacaccta ttcatactcg tgctctggct cggcaatcac 350
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ctgtagcagc aaaaacaaag agtgtgaggc cttcatttgc aactgcgacc 400

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aacctggaca ccaagaagta ttgtcagagt tgaatatcac ctctcaaaag 500

catcacctct atctgcctca tctcacactg tactctccaa taaagcacct 550

tgttgaaaga cctcaaaaaa aaaaaaaaaa aaaaa 585

<210> 28
<211> 148
<212> PRT
<213> Homo sapien

<400> 28

Met	Lys	Leu	Leu	Val	Leu	Ala	Val	Leu	Leu	Thr	Val	Ala	Ala	Ala	
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Asp	Ser	Gly	Ile	Ser	Pro	Arg	Ala	Val	Trp	Gln	Phe	Arg	Lys	Met	
				20					25					30	
Ile	Lys	Cys	Val	Ile	Pro	Gly	Ser	Asp	Pro	Phe	Leu	Glu	Tyr	Asn	
				35					40					45	
Asn	Tyr	Gly	Cys	Tyr	Cys	Gly	Leu	Gly	Gly	Ser	Gly	Thr	Pro	Val	
				50					55					60	
Asp	Glu	Leu	Asp	Lys	Cys	Cys	Gln	Thr	His	Asp	Asn	Cys	Tyr	Asp	
				65					70					75	
Gln	Ala	Lys	Lys	Leu	Asp	Ser	Cys	Lys	Phe	Leu	Leu	Asp	Asn	Pro	
				80					85					90	
Tyr	Thr	His	Thr	Tyr	Ser	Tyr	Ser	Cys	Ser	Gly	Ser	Ala	Ile	Thr	
				95					100					105	
Cys	Ser	Ser	Lys	Asn	Lys	Glu	Cys	Glu	Ala	Phe	Ile	Cys	Asn	Cys	
				110					115					120	
Asp	Arg	Asn	Ala	Ala	Ile	Cys	Phe	Ser	Lys	Ala	Pro	Tyr	Asn	Lys	
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Ala	His	Lys	Asn	Leu	Asp	Thr	Lys	Lys	Tyr	Cys	Gln	Ser			
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<211> 2876
<212> DNA
<213> Homo sapien

<400> 29
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tcgaatcggc ggcggcggat tccccgcgcg cccggcgtcg gggcttccag 150

gaggatgcgg agccccagcg cggcgtggct gctgggggcc gccatcctgc 200

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catctgtcct cactggaaaa ctgaccactg tcttccttcc aattgtctac 400

acaattgtgt ttgtggtggg tttgccaagt aacggcatgg ccctgtgggt 450

ctttcttttc cgaactaaga agaagcaccc tgctgtgatt tacatggcca 500

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gcctatcaca tacatggcaa caactggatt tatggggaag ctctttgtaa 600

tgtgcttatt ggctttttct atggcaacat gtactgttcc attctcttca 650

tgacctgcct cagtgtgcag aggtattggg tcatcgtgaa ccccatgggg 700

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<211> 397
<212> PRT
<213> Homo sapien

<400> 30

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			20					25						30	
Arg	Ser	Ser	Lys	Gly	Arg	Ser	Leu	Ile	Gly	Lys	Val	Asp	Gly	Thr	
			35					40						45	

Ser His Val Thr Gly Lys Gly Val Thr Val Glu Thr Val Phe Ser
50 55 60

Val Asp Glu Phe Ser Ala Ser Val Leu Thr Gly Lys Leu Thr Thr
65 70 75

Val Phe Leu Pro Ile Val Tyr Thr Ile Val Phe Val Val Gly Leu
80 85 90

Pro Ser Asn Gly Met Ala Leu Trp Val Phe Leu Phe Arg Thr Lys
95 100 105

Lys Lys His Pro Ala Val Ile Tyr Met Ala Asn Leu Ala Leu Ala
110 115 120

Asp Leu Leu Ser Val Ile Trp Phe Pro Leu Lys Ile Ala Tyr His
125 130 135

Ile His Gly Asn Asn Trp Ile Tyr Gly Glu Ala Leu Cys Asn Val
140 145 150

Leu Ile Gly Phe Phe Tyr Gly Asn Met Tyr Cys Ser Ile Leu Phe
155 160 165

Met Thr Cys Leu Ser Val Gln Arg Tyr Trp Val Ile Val Asn Pro
170 175 180

Met Gly His Ser Arg Lys Lys Ala Asn Ile Ala Ile Gly Ile Ser
185 190 195

Leu Ala Ile Trp Leu Leu Ile Leu Leu Val Thr Ile Pro Leu Tyr
200 205 210

Val Val Lys Gln Thr Ile Phe Ile Pro Ala Leu Asn Ile Thr Thr
215 220 225

Cys His Asp Val Leu Pro Glu Gln Leu Leu Val Gly Asp Met Phe
230 235 240

Asn Tyr Phe Leu Ser Leu Ala Ile Gly Val Phe Leu Phe Pro Ala
245 250 255

Phe Leu Thr Ala Ser Ala Tyr Val Leu Met Ile Arg Met Leu Arg
260 265 270

Ser Ser Ala Met Asp Glu Asn Ser Glu Lys Lys Arg Lys Arg Ala
275 280 285

Ile Lys Leu Ile Val Thr Val Leu Ala Met Tyr Leu Ile Cys Phe
290 295 300

Thr Pro Ser Asn Leu Leu Leu Val Val His Tyr Phe Leu Ile Lys
305 310 315

Ser Gln Gly Gln Ser His Val Tyr Ala Leu Tyr Ile Val Ala Leu
320 325 330

Cys Leu Ser Thr Leu Asn Ser Cys Ile Asp Pro Phe Val Tyr Tyr
335 340 345

Phe Val Ser His Asp Phe Arg Asp His Ala Lys Asn Ala Leu Leu

350 355 360

Cys Arg Ser Val Arg Thr Val Lys Gln Met Gln Val Ser Leu Thr
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Thr Thr Val Lys Thr Ser Tyr
395

<210> 31
<211> 3279
<212> DNA
<213> Homo sapien

<400> 31
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aatgttccat tgccagaatt tcctgaacac cctttccaag aagaacatct 950

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<210> 32
<211> 1019
<212> PRT
<213> Homo sapien

<400> 32

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Leu Cys Gly Phe Gln Lys Lys Thr Tyr Ser Lys Met Asn Asn Pro
35 40 45

Ala Ile Lys Arg Ile Gly Asn His Ile Thr Lys Ser Pro Glu Asp
50 55 60

Lys Arg Glu Tyr Arg Gly Leu Glu Leu Ala Asn Gly Ile Lys Val
65 70 75

Leu Leu Met Ser Asp Pro Thr Thr Asp Lys Ser Ser Ala Ala Leu
80 85 90

Asp Val His Ile Gly Ser Leu Ser Asp Pro Pro Asn Ile Ala Gly
95 100 105

Leu Ser His Phe Cys Glu His Met Leu Phe Leu Gly Thr Lys Lys
110 115 120

Tyr Pro Lys Glu Asn Glu Tyr Ser Gln Phe Leu Ser Glu His Ala
125 130 135

Gly Ser Ser Asn Ala Phe Thr Ser Gly Glu His Thr Asn Tyr Tyr

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Phe Asp Val Ser His Glu His Leu Glu Gly Ala Leu Asp Arg Phe
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Ala Gln Phe Phe Leu Cys Pro Leu Phe Asp Glu Ser Cys Lys Asp
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Arg Glu Val Asn Ala Val Asp Ser Glu His Glu Lys Asn Val Met
                185                 190                 195

Asn Asp Ala Trp Arg Leu Phe Gln Leu Glu Lys Ala Thr Gly Asn
                200                 205                 210

Pro Lys His Pro Phe Ser Lys Phe Gly Thr Gly Asn Lys Tyr Thr
                215                 220                 225

Leu Glu Thr Arg Pro Asn Gln Glu Gly Ile Asp Val Arg Gln Glu
                230                 235                 240

Leu Leu Lys Phe His Ser Ala Tyr Tyr Ser Ser Asn Leu Met Ala
                245                 250                 255

Val Cys Val Leu Gly Arg Glu Ser Leu Asp Asp Leu Thr Asn Leu
                260                 265                 270

Val Val Lys Leu Phe Ser Glu Val Glu Asn Lys Asn Val Pro Leu
                275                 280                 285

Pro Glu Phe Pro Glu His Pro Phe Gln Glu Glu His Leu Lys Gln
                290                 295                 300

Leu Tyr Lys Ile Val Pro Ile Lys Asp Ile Arg Asn Leu Tyr Val
                305                 310                 315

Thr Phe Pro Ile Pro Asp Leu Gln Lys Tyr Tyr Lys Ser Asn Pro
                320                 325                 330

Gly His Tyr Leu Gly His Leu Ile Gly His Glu Gly Pro Gly Ser
                335                 340                 345

Leu Leu Ser Glu Leu Lys Ser Lys Gly Trp Val Asn Thr Leu Val
                350                 355                 360

Gly Gly Gln Lys Glu Gly Ala Arg Gly Phe Met Phe Phe Ile Ile
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Asn Val Asp Leu Thr Glu Glu Gly Leu Leu His Val Glu Asp Ile
                380                 385                 390

Ile Leu His Met Phe Gln Tyr Ile Gln Lys Leu Arg Ala Glu Gly
                395                 400                 405

Pro Gln Glu Trp Val Phe Gln Glu Cys Lys Asp Leu Asn Ala Val
                410                 415                 420

Ala Phe Arg Phe Lys Asp Lys Glu Arg Pro Arg Gly Tyr Thr Ser
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Lys Ile Ala Gly Ile Leu His Tyr Tyr Pro Leu Glu Glu Val Leu
                440                 445                 450
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Thr Ala Glu Tyr Leu Leu Glu Glu Phe Arg Pro Asp Leu Ile Glu
455 460 465

Met Val Leu Asp Lys Leu Arg Pro Glu Asn Val Arg Val Ala Ile
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Val Ser Lys Ser Phe Glu Gly Lys Thr Asp Arg Thr Glu Glu Trp
485 490 495

Tyr Gly Thr Gln Tyr Lys Gln Glu Ala Ile Pro Asp Glu Val Ile
500 505 510

Lys Lys Trp Gln Asn Ala Asp Leu Asn Gly Lys Phe Lys Leu Pro
515 520 525

Thr Lys Asn Glu Phe Ile Pro Thr Asn Phe Glu Ile Leu Pro Leu
530 535 540

Glu Lys Glu Ala Thr Pro Tyr Pro Ala Leu Ile Lys Asp Thr Val
545 550 555

Met Ser Lys Leu Trp Phe Lys Gln Asp Asp Lys Lys Lys Lys Pro
560 565 570

Lys Ala Cys Leu Asn Phe Glu Phe Phe Ser Pro Phe Ala Tyr Val
575 580 585

Asp Pro Leu His Cys Asn Met Ala Tyr Leu Tyr Leu Glu Leu Leu
590 595 600

Lys Asp Ser Leu Asn Glu Tyr Ala Tyr Ala Ala Glu Leu Ala Gly
605 610 615

Leu Ser Tyr Asp Leu Gln Asn Thr Ile Tyr Gly Met Tyr Leu Ser
620 625 630

Val Lys Gly Tyr Asn Asp Lys Gln Pro Ile Leu Leu Lys Lys Ile
635 640 645

Ile Glu Lys Met Ala Thr Phe Glu Ile Asp Glu Lys Arg Phe Glu
650 655 660

Ile Ile Lys Glu Ala Tyr Met Arg Ser Leu Asn Asn Phe Arg Ala
665 670 675

Glu Gln Pro His Gln His Ala Met Tyr Tyr Leu Arg Leu Leu Met
680 685 690

Thr Glu Val Ala Trp Thr Lys Asp Glu Leu Lys Glu Ala Leu Asp
695 700 705

Asp Val Thr Leu Pro Arg Leu Lys Ala Phe Ile Pro Gln Leu Leu
710 715 720

Ser Arg Leu His Ile Glu Ala Leu Leu His Gly Asn Ile Thr Lys
725 730 735

Gln Ala Ala Leu Gly Ile Met Gln Met Val Glu Asp Thr Leu Ile
740 745 750

Glu His Ala His Thr Lys Pro Leu Leu Pro Ser Gln Leu Val Arg
755 760 765

Tyr Arg Glu Val Gln Leu Pro Asp Arg Gly Trp Phe Val Tyr Gln
770 775 780

Gln Arg Asn Glu Val His Asn Asn Cys Gly Ile Glu Ile Tyr Tyr
785 790 795

Gln Thr Asp Met Gln Ser Thr Ser Glu Asn Met Phe Leu Glu Leu
800 805 810

Phe Cys Gln Ile Ile Ser Glu Pro Cys Phe Asn Thr Leu Arg Thr
815 820 825

Lys Glu Gln Leu Gly Tyr Ile Val Phe Ser Gly Pro Arg Arg Ala
830 835 840

Asn Gly Ile Gln Ser Leu Arg Phe Ile Ile Gln Ser Glu Lys Pro
845 850 855

Pro His Tyr Leu Glu Ser Arg Val Glu Ala Phe Leu Ile Thr Met
860 865 870

Glu Lys Ser Ile Glu Asp Met Thr Glu Glu Ala Phe Gln Lys His
875 880 885

Ile Gln Ala Leu Ala Ile Arg Arg Leu Asp Lys Pro Lys Lys Leu
890 895 900

Ser Ala Glu Cys Ala Lys Tyr Trp Gly Glu Ile Ile Ser Gln Gln
905 910 915

Tyr Asn Phe Asp Arg Asp Asn Thr Glu Val Ala Tyr Leu Lys Thr
920 925 930

Leu Thr Lys Glu Asp Ile Ile Lys Phe Tyr Lys Glu Met Leu Ala
935 940 945

Val Asp Ala Pro Arg Arg His Lys Val Ser Val His Val Leu Ala
950 955 960

Arg Glu Met Asp Ser Cys Pro Val Val Gly Glu Phe Pro Cys Gln
965 970 975

Asn Asp Ile Asn Leu Ser Gln Ala Pro Ala Leu Pro Gln Pro Glu
980 985 990

Val Ile Gln Asn Met Thr Glu Phe Lys Arg Gly Leu Pro Leu Phe
995 1000 1005

Pro Leu Val Lys Pro His Ile Asn Phe Met Ala Ala Lys Leu
1010 1015

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<212> DNA
<213> Homo sapien

<400> 33
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cagctcccat taagccacct ctccatcctg gggccaggac tcttatgccc 150

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gatttatacc tacattggga atgtggtgat ctcagtgaat ccctatcaac 400

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gtgcgacggg caggctatgc ccaccgccag ggttatgggc ccttcctgga 2150

aaggtaccga ttgctgagcc ggagcacctg gcctcactgg aatgggggag 2200

accgggaagg tgttgagaag gtcctggggg agctgagcat gtcctcgggg 2250

gagctggcct ttggcaagac aaagatcttc attagaagcc ccaagactct 2300

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agacatggcc agccgccccc tacaagtgcc tcagcacagc aaatcaggag 2700

ctgcagcagc tcttctacca gtggaagtgc aagaggttcc gggatcagct 2750

gtccccgaag caggtagaga tcctgaggga aaagctctgt gccagtgaac 2800

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tgtgctggat gccacgcaga ggcagcttac agtcaccgtg actgagaagt 3250

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cctgcaggtg gtgacaacag caagctacgc tacaaaaaaa aggggagtca 3350

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agttgcttcc tcctgaacca gcactaatcc ccctctgccc tcctgtgtgg 3450

gaggatctct aacccctctg atcgtggcgc atggcttggg gattaaacta 3500

cccttgaaga ggacccttgt cccaaaccct tcttgttctc tcctccaaaa 3550

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ttggaaaggt tcaaaaaaaa aaaa 3624

<210> 34
<211> 1043
<212> PRT
<213> Homo sapien

<400> 34

Met	Pro	Leu	Leu	Glu	Gly	Ser	Val	Gly	Val	Glu	Asp	Leu	Val	Leu
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				20					25					30	
Arg	Tyr	Glu	Asn	Lys	Glu	Ile	Tyr	Thr	Tyr	Ile	Gly	Asn	Val	Val
				35					40					45	
Ile	Ser	Val	Asn	Pro	Tyr	Gln	Gln	Leu	Pro	Ile	Tyr	Gly	Pro	Glu
				50					55					60	
Phe	Ile	Ala	Lys	Tyr	Gln	Asp	Tyr	Thr	Phe	Tyr	Glu	Leu	Lys	Pro
				65					70					75	
His	Ile	Tyr	Ala	Leu	Ala	Asn	Val	Ala	Tyr	Gln	Ser	Leu	Arg	Asp
				80					85					90	
Arg	Asp	Arg	Asp	Gln	Cys	Ile	Leu	Ile	Thr	Gly	Glu	Ser	Gly	Ser
				95					100					105	
Gly	Lys	Thr	Glu	Ala	Ser	Lys	Leu	Val	Met	Ser	Tyr	Val	Ala	Ala
				110					115					120	
Val	Cys	Gly	Lys	Gly	Glu	Gln	Val	Asn	Ser	Val	Lys	Glu	Gln	Leu
				125					130					135	
Leu	Gln	Ser	Asn	Pro	Val	Leu	Glu	Ala	Phe	Gly	Asn	Ala	Lys	Thr
				140					145					150	
Ile	Arg	Asn	Asn	Asn	Ser	Ser	Arg	Phe	Gly	Lys	Tyr	Met	Asp	Ile
				155					160					165	

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Tyr Leu Leu Glu Lys Ser Arg Leu Val Lys Gln Leu Lys Gly Glu
                185                 190                 195

Arg Asn Phe His Ile Phe Tyr Gln Leu Leu Ala Gly Ala Asp Glu
                200                 205                 210

Gln Leu Leu Lys Ala Leu Lys Leu Glu Arg Asp Thr Thr Gly Tyr
                215                 220                 225

Ala Tyr Leu Asn His Glu Val Ser Arg Val Asp Gly Met Asp Asp
                230                 235                 240

Ala Ser Ser Phe Arg Ala Val Gln Ser Ala Met Ala Val Ile Gly
                245                 250                 255

Phe Ser Glu Glu Glu Ile Arg Gln Val Leu Glu Val Thr Ser Met
                260                 265                 270

Val Leu Lys Leu Gly Asn Val Leu Val Ala Asp Glu Phe Gln Ala
                275                 280                 285

Ser Gly Ile Pro Ala Ser Gly Ile Arg Asp Gly Arg Gly Val Arg
                290                 295                 300

Glu Ile Gly Glu Met Val Gly Leu Asn Ser Glu Glu Val Glu Arg
                305                 310                 315

Ala Leu Cys Ser Arg Thr Met Glu Thr Ala Lys Glu Lys Val Val
                320                 325                 330

Thr Ala Leu Asn Val Met Gln Ala Gln Tyr Ala Arg Asp Ala Leu
                335                 340                 345

Ala Lys Asn Ile Tyr Ser Arg Leu Phe Asp Trp Ile Val Asn Arg
                350                 355                 360

Ile Asn Glu Ser Ile Lys Val Gly Ile Gly Glu Lys Lys Lys Val
                365                 370                 375

Met Gly Val Leu Asp Ile Tyr Gly Phe Glu Ile Leu Glu Asp Asn
                380                 385                 390

Ser Phe Glu Gln Phe Val Ile Asn Tyr Cys Asn Glu Lys Leu Gln
                395                 400                 405

Gln Val Phe Ile Glu Met Thr Leu Lys Glu Glu Gln Glu Glu Tyr
                410                 415                 420

Lys Arg Glu Gly Ile Pro Trp Thr Lys Val Asp Tyr Phe Asp Asn
                425                 430                 435

Gly Ile Ile Cys Lys Leu Ile Glu His Asn Gln Arg Gly Ile Leu
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Ala Met Leu Asp Glu Glu Cys Leu Arg Pro Gly Val Val Ser Asp
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Ser Thr Phe Leu Ala Lys Leu Asn Gln Leu Phe Ser Lys His Gly
                470                 475                 480

His Tyr Glu Ser Lys Val Thr Gln Asn Ala Gln Arg Gln Tyr Asp
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His Thr Met Gly Leu Ser Cys Phe Arg Ile Cys His Tyr Ala Gly
                500                 505                 510

Lys Val Thr Tyr Asn Val Thr Ser Phe Ile Asp Lys Asn Asn Asp
                515                 520                 525

Leu Leu Phe Arg Asp Leu Leu Gln Ala Met Trp Lys Ala Gln His
                530                 535                 540

Pro Leu Leu Arg Ser Leu Phe Pro Glu Gly Asn Pro Lys Gln Ala
                545                 550                 555

Ser Leu Lys Arg Pro Pro Thr Ala Gly Ala Gln Phe Lys Ser Ser
                560                 565                 570

Val Ala Ile Leu Met Lys Asn Leu Tyr Ser Lys Ser Pro Asn Tyr
                575                 580                 585

Ile Arg Cys Ile Lys Pro Asn Glu His Gln Gln Arg Gly Gln Phe
                590                 595                 600

Ser Ser Asp Leu Val Ala Thr Gln Ala Arg Tyr Leu Gly Leu Leu
                605                 610                 615

Glu Asn Val Arg Val Arg Arg Ala Gly Tyr Ala His Arg Gln Gly
                620                 625                 630

Tyr Gly Pro Phe Leu Glu Arg Tyr Arg Leu Leu Ser Arg Ser Thr
                635                 640                 645

Trp Pro His Trp Asn Gly Gly Asp Arg Glu Gly Val Glu Lys Val
                650                 655                 660

Leu Gly Glu Leu Ser Met Ser Ser Gly Glu Leu Ala Phe Gly Lys
                665                 670                 675

Thr Lys Ile Phe Ile Arg Ser Pro Lys Thr Leu Phe Tyr Leu Glu
                680                 685                 690

Glu Gln Arg Arg Leu Arg Leu Gln Gln Leu Ala Thr Leu Ile Gln
                695                 700                 705

Lys Ile Tyr Arg Gly Trp Arg Cys Arg Thr His Tyr Gln Leu Met
                710                 715                 720

Arg Lys Ser Gln Ile Leu Ile Ser Ser Trp Phe Arg Gly Asn Met
                725                 730                 735

Gln Lys Lys Cys Tyr Gly Lys Ile Lys Ala Ser Val Leu Leu Ile
                740                 745                 750

Gln Ala Phe Val Arg Gly Trp Lys Ala Arg Lys Asn Tyr Arg Lys
                755                 760                 765

Tyr Phe Arg Ser Glu Ala Ala Leu Thr Leu Ala Asp Phe Ile Tyr
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770 775 780

Lys Ser Met Val Gln Lys Phe Leu Leu Gly Leu Lys Asn Asn Leu
785 790 795

Pro Ser Thr Asn Val Leu Asp Lys Thr Trp Pro Ala Ala Pro Tyr
800 805 810

Lys Cys Leu Ser Thr Ala Asn Gln Glu Leu Gln Gln Leu Phe Tyr
815 820 825

Gln Trp Lys Cys Lys Arg Phe Arg Asp Gln Leu Ser Pro Lys Gln
830 835 840

Val Glu Ile Leu Arg Glu Lys Leu Cys Ala Ser Glu Leu Phe Lys
845 850 855

Gly Lys Lys Ala Ser Tyr Pro Gln Ser Val Pro Ile Pro Phe Cys
860 865 870

Gly Asp Tyr Ile Gly Leu Gln Gly Asn Pro Lys Leu Gln Lys Leu
875 880 885

Lys Gly Gly Glu Glu Gly Pro Val Leu Met Ala Glu Ala Val Lys
890 895 900

Lys Val Asn Arg Gly Asn Gly Lys Thr Ser Ser Arg Ile Leu Leu
905 910 915

Leu Thr Lys Gly His Val Ile Leu Thr Asp Thr Lys Lys Ser Gln
920 925 930

Ala Lys Ile Val Ile Gly Leu Asp Asn Val Ala Gly Val Ser Val
935 940 945

Thr Ser Leu Lys Asp Gly Leu Phe Ser Leu His Leu Ser Glu Met
950 955 960

Ser Ser Val Gly Ser Lys Gly Asp Phe Leu Leu Val Ser Glu His
965 970 975

Val Ile Glu Leu Leu Thr Lys Met Tyr Arg Ala Val Leu Asp Ala
980 985 990

Thr Gln Arg Gln Leu Thr Val Thr Val Thr Glu Lys Phe Ser Val
995 1000 1005

Arg Phe Lys Glu Asn Ser Val Ala Val Lys Val Val Gln Gly Pro
1010 1015 1020

Ala Gly Gly Asp Asn Ser Lys Leu Arg Tyr Lys Lys Lys Gly Ser
1025 1030 1035

His Cys Leu Glu Val Thr Val Gln
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<210> 35
<211> 1876
<212> DNA
<213> Homo sapien

<400> 35
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tgactttctc aaaagacggc gcccaaagaa ctacccgccg gggccctggc 150

gcctgccctt ccttggcaac ttcttccttg tggacttcga gcagtcgcac 200

ctggaggttc agctgtttgt gaagaaatat gggaaccttt ttagcttgga 250

gcttggtgac atatctgcag ttcttattac tggcttgccc ttaatcaaag 300

aagcccttat ccacatggac caaaactttg ggaaccgccc cgtgacccct 350

atgcgagaac atatctttaa gaaaaatgga ttgattatgt caagtggcca 400

ggcatggaag gagcaaagaa ggttcactct gacagcacta aggaactttg 450

gtttaggaaa gaagagctta gaggaacgca ttcaggagga ggcccaacac 500

ctcactgaag caataaaaga ggagaacgga cagccttttg accctcattt 550

caagatcaac aatgcagttt ccaatatcat ttgctccatc accttcggag 600

aacgctttga gtaccaggat agttggtttc agcagctgct gaagttacta 650

gatgaagtca catacttgga ggcttcaaag acatgccagc tctacaatgt 700

ctttccatgg ataatgaaat tcctgcctgg accccaccaa actctcttca 750

gcaactggaa aaaactgaaa ttgtttgttt ctcatatgat tgacaaacac 800

agaaaggatt ggaatcctgc agaaacaaga gactttattg atgcttacct 850

taaagaaatg tcaaagcaca caggcaatcc tacttcaagt ttccatgaag 900

aaaacctcat ctgcagcacc ctggacctct tctttgccgg aaccgagaca 950

acttccacaa ctctgcgatg ggctctgctt tatatggccc tctacccaga 1000

aatccaagaa aaagtacaag ctgagattga cagagtgatt ggccaggggc 1050

agcagccgag cacagccgcc cgggagtcca tgccctacac caatgctgtc 1100

atccatgagg tgcagagaat gggcaacatc atccccctga acgttcccag 1150

ggaagtgaca gttgatacca ctttggctgg gtaccacctg cccaagggta 1200

ccatgatcct gaccaatttg acggcgctgc acagggaccc cacagagtgg 1250

gccacccctg acacattcaa tccggaccat tttctggaga atggacagtt 1300

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tcggagaaca gttggccagg actgagctgt ttattttctt cacttccctt 1400

atgcaaaaat ttaccttcag gcccccaaac aatgagaagc tgagcctgaa 1450

gtttagaatg ggtatcacca tttccccagt cagtcaccgc ctctgcgctg 1500

ttcctcaggt gtaatattgt taagaaagaa aggggcaagg aaagtaagaa 1550

gacatggcac gtgttctgaa accactggtg tctgctcaga tgtgttggga 1600

caaaatgaaa gtgactttca agaaagatca gaggaatttg actcagagaa 1650

aactagatcc aaatcccagc tctactgtct cgtccgaatt agccttggga 1700

aaatcattta tatgctaaat aatttacctt tttatctagg agatgaaaag 1750

aggataatgt ttccttccat aaagaaagtt cttgtaagaa tcaaaagaaa 1800

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atctataaaa aaaaaaaaaa aaaaaa 1876

<210> 36
<211> 502
<212> PRT
<213> Homo sapien

<400> 36

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				20				25						30	
Ala	Ala	Asp	Phe	Leu	Lys	Arg	Arg	Arg	Pro	Lys	Asn	Tyr	Pro	Pro	
				35				40						45	
Gly	Pro	Trp	Arg	Leu	Pro	Phe	Leu	Gly	Asn	Phe	Phe	Leu	Val	Asp	
				50				55						60	
Phe	Glu	Gln	Ser	His	Leu	Glu	Val	Gln	Leu	Phe	Val	Lys	Lys	Tyr	
				65				70						75	
Gly	Asn	Leu	Phe	Ser	Leu	Glu	Leu	Gly	Asp	Ile	Ser	Ala	Val	Leu	
				80				85						90	
Ile	Thr	Gly	Leu	Pro	Leu	Ile	Lys	Glu	Ala	Leu	Ile	His	Met	Asp	
				95				100						105	
Gln	Asn	Phe	Gly	Asn	Arg	Pro	Val	Thr	Pro	Met	Arg	Glu	His	Ile	
				110				115						120	
Phe	Lys	Lys	Asn	Gly	Leu	Ile	Met	Ser	Ser	Gly	Gln	Ala	Trp	Lys	
				125				130						135	
Glu	Gln	Arg	Arg	Phe	Thr	Leu	Thr	Ala	Leu	Arg	Asn	Phe	Gly	Leu	
				140				145						150	
Gly	Lys	Lys	Ser	Leu	Glu	Glu	Arg	Ile	Gln	Glu	Glu	Ala	Gln	His	
				155				160						165	
Leu	Thr	Glu	Ala	Ile	Lys	Glu	Glu	Asn	Gly	Gln	Pro	Phe	Asp	Pro	
				170				175						180	
His	Phe	Lys	Ile	Asn	Asn	Ala	Val	Ser	Asn	Ile	Ile	Cys	Ser	Ile	
				185				190						195	

Thr Phe Gly Glu Arg Phe Glu Tyr Gln Asp Ser Trp Phe Gln Gln
200 205 210

Leu Leu Lys Leu Leu Asp Glu Val Thr Tyr Leu Glu Ala Ser Lys
215 220 225

Thr Cys Gln Leu Tyr Asn Val Phe Pro Trp Ile Met Lys Phe Leu
230 235 240

Pro Gly Pro His Gln Thr Leu Phe Ser Asn Trp Lys Lys Leu Lys
245 250 255

Leu Phe Val Ser His Met Ile Asp Lys His Arg Lys Asp Trp Asn
260 265 270

Pro Ala Glu Thr Arg Asp Phe Ile Asp Ala Tyr Leu Lys Glu Met
275 280 285

Ser Lys His Thr Gly Asn Pro Thr Ser Ser Phe His Glu Glu Asn
290 295 300

Leu Ile Cys Ser Thr Leu Asp Leu Phe Phe Ala Gly Thr Glu Thr
305 310 315

Thr Ser Thr Thr Leu Arg Trp Ala Leu Leu Tyr Met Ala Leu Tyr
320 325 330

Pro Glu Ile Gln Glu Lys Val Gln Ala Glu Ile Asp Arg Val Ile
335 340 345

Gly Gln Gly Gln Gln Pro Ser Thr Ala Ala Arg Glu Ser Met Pro
350 355 360

Tyr Thr Asn Ala Val Ile His Glu Val Gln Arg Met Gly Asn Ile
365 370 375

Ile Pro Leu Asn Val Pro Arg Glu Val Thr Val Asp Thr Thr Leu
380 385 390

Ala Gly Tyr His Leu Pro Lys Gly Thr Met Ile Leu Thr Asn Leu
395 400 405

Thr Ala Leu His Arg Asp Pro Thr Glu Trp Ala Thr Pro Asp Thr
410 415 420

Phe Asn Pro Asp His Phe Leu Glu Asn Gly Gln Phe Lys Lys Arg
425 430 435

Glu Ala Phe Met Pro Phe Ser Ile Gly Lys Arg Ala Cys Leu Gly
440 445 450

Glu Gln Leu Ala Arg Thr Glu Leu Phe Ile Phe Phe Thr Ser Leu
455 460 465

Met Gln Lys Phe Thr Phe Arg Pro Pro Asn Asn Glu Lys Leu Ser
470 475 480

Leu Lys Phe Arg Met Gly Ile Thr Ile Ser Pro Val Ser His Arg
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Leu Cys Ala Val Pro Gln Val

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<210> 37
<211> 1577
<212> DNA
<213> Homo sapien

<400> 37
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ttcggaatga gtttgaaaaa atctgcagaa aggaggtgaa accattagga 350

ttaacagtaa tgagagatgt gaccatttcg aaatccgaat atgctccaag 400

tgagaagatg atcacgaagg tccaggattt ccaggaagat aaggagctct 450

tcagatactg cactctcccc gagattctga aatatgtgga gtgcttcact 500

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cacatcagcc ggaacaacgg ctgtctggtt gtgctcccag gcacacacaa 700

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tgaaaatagc gtgaacttga aggatatttg gatgtttcga gctcgacttg 1050

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caacagaaaa ccaaaaccaa acgaaatgtc taaggaaaat gttttcttaa 1150

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caggtactta attgcataga gttagttttg cagcacaatg gtgttgcttt 1250

aatggaaaaa aaaaacagta aaagtgaaat attactgttt taaggaaaac 1300

taatttaggg tggcagccaa taaaggtggt tggtgtctaa tttaagtgtt 1350

aaatcaattt ctttcattca gttagctctt tacccaagaa gaagtgaatg 1400

atttggagct tagggtatgt tttgtatccc ctttctgata aacccattcc 1450

ctaccaattt tatgtcataa gagatttttt tcccccaaat ctagaacaat 1500

gtataataca ttcacatcta gtcaagggca taggaacggt gtcatggagt 1550

ccaaataaag tggatattcc tgctcgg 1577

<210> 38
<211> 338
<212> PRT
<213> Homo sapien

<400> 38

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				20				25						30
Ser	Gly	Thr	Ile	Ser	Ser	Ala	Ser	Phe	His	Pro	Gln	Gln	Phe	Gln
				35				40						45
Tyr	Thr	Leu	Asp	Asn	Asn	Val	Leu	Thr	Leu	Glu	Gln	Arg	Lys	Phe
				50				55						60
Tyr	Glu	Glu	Asn	Gly	Phe	Leu	Val	Ile	Lys	Asn	Leu	Val	Pro	Asp
				65				70						75
Ala	Asp	Ile	Gln	Arg	Phe	Arg	Asn	Glu	Phe	Glu	Lys	Ile	Cys	Arg
				80				85						90
Lys	Glu	Val	Lys	Pro	Leu	Gly	Leu	Thr	Val	Met	Arg	Asp	Val	Thr
				95				100						105
Ile	Ser	Lys	Ser	Glu	Tyr	Ala	Pro	Ser	Glu	Lys	Met	Ile	Thr	Lys
				110				115						120
Val	Gln	Asp	Phe	Gln	Glu	Asp	Lys	Glu	Leu	Phe	Arg	Tyr	Cys	Thr
				125				130						135
Leu	Pro	Glu	Ile	Leu	Lys	Tyr	Val	Glu	Cys	Phe	Thr	Gly	Pro	Asn
				140				145						150
Ile	Met	Ala	Met	His	Thr	Met	Leu	Ile	Asn	Lys	Pro	Pro	Asp	Ser
				155				160						165
Gly	Lys	Lys	Thr	Ser	Arg	His	Pro	Leu	His	Gln	Asp	Leu	His	Tyr
				170				175						180
Phe	Pro	Phe	Arg	Pro	Ser	Asp	Leu	Ile	Val	Cys	Ala	Trp	Thr	Ala
				185				190						195
Met	Glu	His	Ile	Ser	Arg	Asn	Asn	Gly	Cys	Leu	Val	Val	Leu	Pro
				200				205						210
Gly	Thr	His	Lys	Gly	Ser	Leu	Lys	Pro	His	Asp	Tyr	Pro	Lys	Trp
				215				220						225

Glu Gly Gly Val Asn Lys Met Phe His Gly Ile Gln Asp Tyr Glu
230 235 240

Glu Asn Lys Ala Arg Val His Leu Val Met Glu Lys Gly Asp Thr
245 250 255

Val Phe Phe His Pro Leu Leu Ile His Gly Ser Gly Gln Asn Lys
260 265 270

Thr Gln Gly Phe Arg Lys Ala Ile Ser Cys His Phe Ala Ser Ala
275 280 285

Asp Cys His Tyr Ile Asp Val Lys Gly Thr Ser Gln Glu Asn Ile
290 295 300

Glu Lys Glu Val Val Gly Ile Ala His Lys Phe Phe Gly Ala Glu
305 310 315

Asn Ser Val Asn Leu Lys Asp Ile Trp Met Phe Arg Ala Arg Leu
320 325 330

Val Lys Gly Glu Arg Thr Asn Leu
335

<210> 39
<211> 716
<212> DNA
<213> Homo sapien

<400> 39
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ttaagggaac aagctggagg tgacgctact gagaactttg aggatgtcgg 200

gcactctaca gatgccaggg aaatgtccaa aacattcatc attggggagc 250

tccatccaga tgacagacca aagttaaaca agcctccaga accttaaagg 300

cggtgtttca aggaaactct tatcactact attgattcta gttccagttg 350

gtggaccaac tgggtgatcc ctgccatctc tgcagtggcc gtcgccttga 400

tgtatcgcct atacatggca gaggactgaa cacctcctca gaagtcagcg 450

caggaagagc ctgctttgga cacgggagaa aagaagccat tgctaactac 500

ttcaactgac agaaaccttc acttgaaaac aatgatttta atatatctct 550

ttctttttct tccgacatta gaaacaaaac aaaaagaact gtcctttctg 600

cgctcaaatt tttcgagtgt gccttttttat tcatctactt tattttgatg 650

tttccttaat gtgtaattta cttattataa gcatgatctt ttaaaaatat 700

atttggcttt taaagt 716

<210> 40
<211> 98
<212> PRT
<213> Homo sapien

<400> 40
Met Ala Glu Gln Ser Asp Glu Ala Val Lys Tyr Tyr Thr Leu Glu
1 5 10 15

Glu Ile Gln Lys His Asn His Ser Lys Ser Thr Trp Leu Ile Leu
20 25 30

His His Lys Val Tyr Asp Leu Thr Lys Phe Leu Glu Glu His Pro
35 40 45

Gly Gly Glu Glu Val Leu Arg Glu Gln Ala Gly Gly Asp Ala Thr
50 55 60

Glu Asn Phe Glu Asp Val Gly His Ser Thr Asp Ala Arg Glu Met
65 70 75

Ser Lys Thr Phe Ile Ile Gly Glu Leu His Pro Asp Asp Arg Pro
80 85 90

Lys Leu Asn Lys Pro Pro Glu Pro
95

<210> 41
<211> 578
<212> DNA
<213> Homo sapien

<400> 41
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ggattcagca ccatggcgga agacatggag accaaaatca agaactacaa 200

gaccgccccc tttgacagcc gcttccccaa ccagaaccag actagaaact 250

gctggcagaa ctacctggac ttccaccgct gtcagaaggc aatgaccgct 300

aaaggaggcg atatctctgt gtgcgaatgg taccagcgtg tgtaccagtc 350

cctctgcccc acatcctggg tcacagactg ggatgagcaa cgggctgaag 400

gcacgtttcc cgggaagatc tgaactggct gcatctccct ttcctctgtc 450

ctccatcctt ctcccaggat ggtgaagggg gacctggtac ccagtgatcc 500

ccaccccagg atcctaaatc atgacttacc tgctaataaa aactcattgg 550

aaaagtgaaa aaaaaaaaaa aaaaaaaa 578

<210> 42
<211> 86
<212> PRT
<213> Homo sapien

<400> 42

Met Ala Glu Asp Met Glu Thr Lys Ile Lys Asn Tyr Lys Thr Ala
1 5 10 15

Pro Phe Asp Ser Arg Phe Pro Asn Gln Asn Gln Thr Arg Asn Cys
20 25 30

Trp Gln Asn Tyr Leu Asp Phe His Arg Cys Gln Lys Ala Met Thr
35 40 45

Ala Lys Gly Gly Asp Ile Ser Val Cys Glu Trp Tyr Gln Arg Val
50 55 60

Tyr Gln Ser Leu Cys Pro Thr Ser Trp Val Thr Asp Trp Asp Glu
65 70 75

Gln Arg Ala Glu Gly Thr Phe Pro Gly Lys Ile
80 85

<210> 43
<211> 2444
<212> DNA
<213> Homo sapien

<400> 43

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<210> 44
<211> 596
<212> PRT
<213> Homo sapien

<400> 44

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             20                  25                  30

Ser Ser Glu Asn Ser Ser Ala Glu Arg Asp Leu Ala Asp Val Lys
             35                  40                  45

Ser Ser Leu Val Asn Glu Ser Glu Thr Asn Gln Asn Ser Ser Ser
             50                  55                  60

Asp Ser Glu Ala Glu Arg Arg Pro Pro Pro Arg Ser Glu Ser Phe
             65                  70                  75

Arg Asp Lys Ser Arg Glu Ser Leu Glu Glu Ala Ala Lys Arg Gln
             80                  85                  90

Asp Gly Gly Leu Phe Lys Gly Pro Pro Tyr Pro Gly Tyr Pro Phe
             95                 100                 105

Ile Met Ile Pro Asp Leu Thr Ser Pro Tyr Leu Pro Asn Gly Ser
            110                 115                 120

Leu Ser Pro Thr Ala Arg Thr Tyr Leu Gln Met Lys Trp Pro Leu
            125                 130                 135

Leu Asp Val Gln Ala Gly Ser Leu Gln Ser Arg Gln Ala Leu Lys
            140                 145                 150

Asp Ala Arg Ser Pro Ser Pro Ala His Ile Val Ser Asn Lys Val
            155                 160                 165

Pro Val Val Gln His Pro His His Val His Pro Leu Thr Pro Leu
            170                 175                 180

Ile Thr Tyr Ser Asn Glu His Phe Thr Pro Gly Asn Pro Pro Pro
            185                 190                 195

His Leu Pro Ala Asp Val Asp Pro Lys Thr Gly Ile Pro Arg Pro
            200                 205                 210

Pro His Pro Pro Asp Ile Ser Pro Tyr Tyr Pro Leu Ser Pro Gly
            215                 220                 225

Thr Val Gly Gln Ile Pro His Pro Leu Gly Trp Leu Val Pro Gln
            230                 235                 240

Gln Gly Gln Pro Val Tyr Pro Ile Thr Thr Gly Gly Phe Arg His
            245                 250                 255

Pro Tyr Pro Thr Ala Leu Thr Val Asn Ala Ser Val Ser Arg Phe
            260                 265                 270
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Pro Pro His Met Val Pro Pro His His Thr Leu His Thr Thr Gly
                275                 280                 285

Ile Pro His Pro Ala Ile Val Thr Pro Thr Val Lys Gln Glu Ser
                290                 295                 300

Ser Gln Ser Asp Val Gly Ser Leu His Ser Ser Lys His Gln Asp
                305                 310                 315

Ser Lys Lys Glu Glu Glu Lys Lys Lys Pro His Ile Lys Lys Pro
                320                 325                 330

Leu Asn Ala Phe Met Leu Tyr Met Lys Glu Met Arg Ala Lys Val
                335                 340                 345

Val Ala Glu Cys Thr Leu Lys Glu Ser Ala Ala Ile Asn Gln Ile
                350                 355                 360

Leu Gly Arg Arg Trp His Ala Leu Ser Arg Glu Glu Gln Ala Lys
                365                 370                 375

Tyr Tyr Glu Leu Ala Arg Lys Glu Arg Gln Leu His Met Gln Leu
                380                 385                 390

Tyr Pro Gly Trp Ser Ala Arg Asp Asn Tyr Gly Lys Lys Lys Lys
                395                 400                 405

Arg Lys Arg Asp Lys Gln Pro Gly Glu Thr Asn Glu His Ser Glu
                410                 415                 420

Cys Phe Leu Asn Pro Cys Leu Ser Leu Pro Pro Ile Thr Asp Leu
                425                 430                 435

Ser Ala Pro Lys Lys Cys Arg Ala Arg Phe Gly Leu Asp Gln Gln
                440                 445                 450

Asn Asn Trp Cys Gly Pro Cys Arg Arg Lys Lys Lys Cys Val Arg
                455                 460                 465

Tyr Ile Gln Gly Glu Gly Ser Cys Leu Ser Pro Pro Ser Ser Asp
                470                 475                 480

Gly Ser Leu Leu Asp Ser Pro Pro Pro Ser Pro Asn Leu Leu Gly
                485                 490                 495

Ser Pro Pro Arg Asp Ala Lys Ser Gln Thr Glu Gln Thr Gln Pro
                500                 505                 510

Leu Ser Leu Ser Leu Lys Pro Asp Pro Leu Ala His Leu Ser Met
                515                 520                 525

Met Pro Pro Pro Pro Ala Leu Leu Leu Ala Glu Ala Thr His Lys
                530                 535                 540

Ala Ser Ala Leu Cys Pro Asn Gly Ala Leu Asp Leu Pro Pro Ala
                545                 550                 555

Ala Leu Gln Pro Ala Ala Pro Ser Ser Ser Ile Ala Gln Pro Ser
                560                 565                 570
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Thr Ser Trp Leu His Ser His Ser Ser Leu Ala Gly Thr Gln Pro
575 580 585

Gln Pro Leu Ser Leu Val Thr Lys Ser Leu Glu
590 595

<210> 45
<211> 3697
<212> DNA
<213> Homo sapien

<400> 45
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cctatcacca tagaagtgaa ggacatcaac gacaatcgac ccacgtttct 500

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tgacaaatca agaataaaca ctggttgtag tcagttttgt ttgttaa 3697

<210> 46
<211> 832
<212> PRT
<213> Homo sapien

<400> 46

Met	Ile	Leu	Gln	Ala	His	Leu	His	Ser	Leu	Cys	Leu	Leu	Met	Leu	
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Tyr	Leu	Ala	Thr	Gly	Tyr	Gly	Gln	Glu	Gly	Lys	Phe	Ser	Gly	Pro	
				20				25						30	
Leu	Lys	Pro	Met	Thr	Phe	Ser	Ile	Tyr	Glu	Gly	Gln	Glu	Pro	Ser	
				35				40						45	
Gln	Ile	Ile	Phe	Gln	Phe	Lys	Ala	Asn	Pro	Pro	Ala	Val	Thr	Phe	
				50				55						60	
Glu	Leu	Thr	Gly	Glu	Thr	Asp	Asn	Ile	Phe	Val	Ile	Glu	Arg	Glu	
				65				70						75	
Gly	Leu	Leu	Tyr	Tyr	Asn	Arg	Ala	Leu	Asp	Arg	Glu	Thr	Arg	Ser	
				80				85						90	

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Thr His Asn Leu Gln Val Ala Ala Leu Asp Ala Asn Gly Ile Ile
                 95                  100                 105

Val Glu Gly Pro Val Pro Ile Thr Ile Glu Val Lys Asp Ile Asn
                110                 115                 120

Asp Asn Arg Pro Thr Phe Leu Gln Ser Lys Tyr Glu Gly Ser Val
                125                 130                 135

Arg Gln Asn Ser Arg Pro Gly Lys Pro Phe Leu Tyr Val Asn Ala
                140                 145                 150

Thr Asp Leu Asp Asp Pro Ala Thr Pro Asn Gly Gln Leu Tyr Tyr
                155                 160                 165

Gln Ile Val Ile Gln Leu Pro Met Ile Asn Asn Val Met Tyr Phe
                170                 175                 180

Gln Ile Asn Asn Lys Thr Gly Ala Ile Ser Leu Thr Arg Glu Gly
                185                 190                 195

Ser Gln Glu Leu Asn Pro Ala Lys Asn Pro Ser Tyr Asn Leu Val
                200                 205                 210

Ile Ser Val Lys Asp Met Gly Gly Gln Ser Glu Asn Ser Phe Ser
                215                 220                 225

Asp Thr Thr Ser Val Asp Ile Ile Val Thr Glu Asn Ile Trp Lys
                230                 235                 240

Ala Pro Lys Pro Val Glu Met Val Glu Asn Ser Thr Asp Pro His
                245                 250                 255

Pro Ile Lys Ile Thr Gln Val Arg Trp Asn Asp Pro Gly Ala Gln
                260                 265                 270

Tyr Ser Leu Val Asp Lys Glu Lys Leu Pro Arg Phe Pro Phe Ser
                275                 280                 285

Ile Asp Gln Glu Gly Asp Ile Tyr Val Thr Gln Pro Leu Asp Arg
                290                 295                 300

Glu Glu Lys Asp Ala Tyr Val Phe Tyr Ala Val Ala Lys Asp Glu
                305                 310                 315

Tyr Gly Lys Pro Leu Ser Tyr Pro Leu Glu Ile His Val Lys Val
                320                 325                 330

Lys Asp Ile Asn Asp Asn Pro Pro Thr Cys Pro Ser Pro Val Thr
                335                 340                 345

Val Phe Glu Val Gln Glu Asn Glu Arg Leu Gly Asn Ser Ile Gly
                350                 355                 360

Thr Leu Thr Ala His Asp Arg Asp Glu Glu Asn Thr Ala Asn Ser
                365                 370                 375

Phe Leu Asn Tyr Arg Ile Val Glu Gln Thr Pro Lys Leu Pro Met
                380                 385                 390
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Asp Gly Leu Phe Leu Ile Gln Thr Tyr Ala Gly Met Leu Gln Leu
395 400 405

Ala Lys Gln Ser Leu Lys Lys Gln Asp Thr Pro Gln Tyr Asn Leu
410 415 420

Thr Ile Glu Val Ser Asp Lys Asp Phe Lys Thr Leu Cys Phe Val
425 430 435

Gln Ile Asn Val Ile Asp Ile Asn Asp Gln Ile Pro Ile Phe Glu
440 445 450

Lys Ser Asp Tyr Gly Asn Leu Thr Leu Ala Glu Asp Thr Asn Ile
455 460 465

Gly Ser Thr Ile Leu Thr Ile Gln Ala Thr Asp Ala Asp Glu Pro
470 475 480

Phe Thr Gly Ser Ser Lys Ile Leu Tyr His Ile Ile Lys Gly Asp
485 490 495

Ser Glu Gly Arg Leu Gly Val Asp Thr Asp Pro His Thr Asn Thr
500 505 510

Gly Tyr Val Ile Ile Lys Lys Pro Leu Asp Phe Glu Thr Ala Ala
515 520 525

Val Ser Asn Ile Val Phe Lys Ala Glu Asn Pro Glu Pro Leu Val
530 535 540

Phe Gly Val Lys Tyr Asn Ala Ser Ser Phe Ala Lys Phe Thr Leu
545 550 555

Ile Val Thr Asp Val Asn Glu Ala Pro Gln Phe Ser Gln His Val
560 565 570

Phe Gln Ala Lys Val Ser Glu Asp Val Ala Ile Gly Thr Lys Val
575 580 585

Gly Asn Val Thr Ala Lys Asp Pro Glu Gly Leu Asp Ile Ser Tyr
590 595 600

Ser Leu Arg Gly Asp Thr Arg Gly Trp Leu Lys Ile Asp His Val
605 610 615

Thr Gly Glu Ile Phe Ser Val Ala Pro Leu Asp Arg Glu Ala Gly
620 625 630

Ser Pro Tyr Arg Val Gln Val Val Ala Thr Glu Val Gly Gly Ser
635 640 645

Ser Leu Ser Ser Val Ser Glu Phe His Leu Ile Leu Met Asp Val
650 655 660

Asn Asp Asn Pro Pro Arg Leu Ala Lys Asp Tyr Thr Gly Leu Phe
665 670 675

Phe Cys His Pro Leu Ser Ala Pro Gly Ser Leu Ile Phe Glu Ala
680 685 690

Thr Asp Asp Asp Gln His Leu Phe Arg Gly Pro His Phe Thr Phe

695 700 705

Ser Leu Gly Ser Gly Ser Leu Gln Asn Asp Trp Glu Val Ser Lys
710 715 720

Ile Asn Gly Thr His Ala Arg Leu Ser Thr Arg His Thr Glu Phe
725 730 735

Glu Glu Arg Glu Tyr Val Val Leu Ile Arg Ile Asn Asp Gly Gly
740 745 750

Arg Pro Pro Leu Glu Gly Ile Val Ser Leu Pro Val Thr Phe Cys
755 760 765

Ser Cys Val Glu Gly Ser Cys Phe Arg Pro Ala Gly His Gln Thr
770 775 780

Gly Ile Pro Thr Val Gly Met Ala Val Gly Ile Leu Leu Thr Thr
785 790 795

Leu Leu Val Ile Gly Ile Ile Leu Ala Val Val Phe Ile Arg Ile
800 805 810

Lys Lys Asp Lys Gly Lys Asp Asn Val Glu Ser Ala Gln Ala Ser
815 820 825

Glu Val Lys Pro Leu Arg Ser
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<210> 47
<211> 1258
<212> DNA
<213> Homo sapien

<400> 47
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<210> 48
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<212> PRT
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Thr	Gly	Cys	Cys	Ala	Gly	Gly	Ala	Ala	Gly	Cys	Ala	Gly	Ala	Gly	
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Gly	Ala	Gly	Gly	Gly	Ala	Gly	Gly	Cys	Ala	Gly	Ala	Ala	Ala	Gly	
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Thr	Gly	Gly	Ala	Gly	Ala	Cys	Gly	Gly	Ala	Cys	Cys	Thr	Gly	Ala	
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Gly	Cys	Cys	Cys	Gly	Ala	Gly	Gly	Ala	Ala	Gly	Ala	Gly	Gly	Cys	
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Ala	Gly	Gly	Cys	Ala	Gly	Ala	Gly	Gly	Cys	Thr	Gly	Ala	Gly	Gly	
				125				130						135	
Cys	Thr	Gly	Ala	Thr	Thr	Cys	Cys	Ala	Cys	Cys	Cys	Cys	Ala	Gly	
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Ala Gly Gly Gly Gly Thr Thr Cys Thr Gly Cys Cys Cys Cys Thr
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Cys Cys Cys Cys Cys Thr Cys Thr Cys Thr Gly Gly Gly Gly Cys
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Thr Cys Cys Thr Gly Cys Ala Thr Cys Cys Cys Ala Cys Cys Ala
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Thr Gly Thr Cys Gly Ala Thr Gly Gly Cys Thr Gly Thr Gly Gly
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Thr Cys Ala Thr Gly Gly Cys Ala Ala Cys Thr Gly Thr Gly Gly
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Thr Gly Thr Cys Cys Ala Cys Thr Gly Thr Gly Cys Ala Cys Gly
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Gly Cys Thr Gly Thr Gly Cys Cys Ala Cys Cys Gly Ala Cys Thr
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Cys Cys Cys Thr Gly Gly Gly Cys Gly Thr Cys Thr Ala Cys Ala
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Cys Gly Thr Cys Cys Ala Thr Gly Cys Thr Gly Gly Cys Cys Cys
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Thr Cys Thr Cys Thr Gly Gly Gly Thr Ala Thr Ala Thr Thr Cys
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Cys Cys Thr Gly Gly Thr Ala Cys Gly Cys Cys Thr Thr Cys Ala
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Ala Cys Ala Thr Cys Ala Cys Cys Cys Gly Gly Gly Ala Cys Thr
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Thr Cys Thr Thr Cys Gly Ala Cys Cys Cys Cys Thr Thr Gly Thr
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Ala Cys Gly Ala Gly Cys Thr Gly Gly Gly Cys Cys Cys Cys Gly
725 730 735

Cys Cys Cys Thr Cys Thr Ala Cys Cys Thr Gly Gly Gly Gly Thr
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Gly Gly Ala Gly Cys Gly Cys Cys Thr Cys Ala Cys Thr Gly Ala

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Gly Cys Cys Thr Cys Thr Gly Cys Cys Thr Cys Thr Gly Cys Thr
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Cys Cys Gly Cys Cys Thr Gly Cys Thr Gly Cys Thr Gly Cys Gly
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Cys Thr Cys Cys Cys Gly Thr Gly Thr Cys Cys Gly Thr Gly Ala
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Thr Gly Cys Cys Cys Gly Thr Cys Gly Cys Cys Ala Cys Cys Thr
                875                 880                 885

Cys Gly Gly Ala Cys Cys Ala Ala Gly Ala Ala Gly Gly Cys Gly
                890                 895                 900

Ala Cys Ala Gly Cys Ala Gly Cys Thr Thr Thr Gly Gly Cys Ala
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Ala Ala Thr Ala Cys Gly Gly Cys Ala Gly Ala Ala Ala Cys Gly
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Cys Cys Thr Ala Cys Gly Thr Gly Thr Ala Gly Cys Ala Gly Cys
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Tnr Cys Thr Gly Gly Cys Cys Cys Gly Thr Gly Gly Gly Cys Cys
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Cys Cys Gly Cys Thr Gly Thr Cys Thr Thr Cys Cys Cys Ala Cys
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Thr Gly Cys Cys Cys Cys Ala Ala Gly Gly Ala Gly Ala Gly Gly
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Gly Gly Ala Cys Cys Thr Gly Gly Cys Cys Gly Gly Gly Gly Cys
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Gly Thr Ala Gly Cys Cys Cys Cys Gly Cys Cys Cys Cys Gly Gly
               1055                1060                1065
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Thr Thr Gly Cys Ala Cys Thr Cys Thr Cys Ala Thr Gly Gly Cys
1085 1090 1095

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1100 1105 1110

Ala Cys Thr Gly Cys Thr Cys Thr Thr Gly Gly Gly Ala Ala Gly
1115 1120 1125

Thr Cys Gly Cys Ala Thr Ala Thr Cys Thr Cys Cys Cys Cys Thr
1130 1135 1140

Cys Thr Gly Ala Gly Gly Cys Thr Gly Gly Ala Thr Cys Cys Cys
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Thr Cys Ala Thr Cys Thr Thr Cys Thr Gly Ala Cys Cys Cys Thr
1160 1165 1170

Gly Gly Gly Thr Thr Cys Thr Gly Gly Gly Cys Thr Gly Thr Gly
1175 1180 1185

Ala Ala Gly Gly Gly Gly Ala Cys Gly Gly Thr Gly Thr Cys Cys
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Cys Cys Gly Cys Ala Cys Gly Thr Thr Thr Gly Thr Ala Thr Thr
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Gly Thr Gly Thr Ala Thr Ala Ala Ala Thr Ala Cys Ala Thr Thr
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				20				25						30	
Arg	Leu	Glu	Leu	Ser	Asp	Ile	Tyr	Gln	Ile	Pro	Ser	Val	Asp	Ser	

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Leu Ala Ser Lys Lys Asn Pro Lys Leu Ile Asn Ala Leu Arg Arg
                65                  70                  75

Cys Phe Phe Trp Arg Phe Met Phe Tyr Gly Ile Phe Leu Tyr Leu
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Gly Glu Val Thr Lys Ala Val Gln Pro Leu Leu Leu Gly Arg Ile
                95                  100                 105

Ile Ala Ser Tyr Asp Pro Asp Asn Lys Glu Glu Arg Ser Ile Ala
                110                 115                 120

Ile Tyr Leu Gly Ile Gly Leu Cys Leu Leu Phe Ile Val Arg Thr
                125                 130                 135

Leu Leu Leu His Pro Ala Ile Phe Gly Leu His His Ile Gly Met
                140                 145                 150

Gln Met Arg Ile Ala Met Phe Ser Leu Ile Tyr Lys Lys Thr Leu
                155                 160                 165

Lys Leu Ser Ser Arg Val Leu Asp Lys Ile Ser Ile Gly Gln Leu
                170                 175                 180

Val Ser Leu Leu Ser Asn Asn Leu Asn Lys Phe Asp Glu Gly Leu
                185                 190                 195

Ala Leu Ala His Phe Val Trp Ile Ala Pro Leu Gln Val Ala Leu
                200                 205                 210

Leu Met Gly Leu Ile Trp Glu Leu Leu Gln Ala Ser Ala Phe Cys
                215                 220                 225

Gly Leu Gly Phe Leu Ile Val Leu Ala Leu Phe Gln Ala Gly Leu
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Gly Arg Met Met Met Lys Tyr Arg Asp Gln Arg Ala Gly Lys Ile
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Ser Glu Arg Leu Val Ile Thr Ser Glu Met Ile Glu Asn Ile Gln
                260                 265                 270

Ser Val Lys Ala Tyr Cys Trp Glu Glu Ala Met Glu Lys Met Ile
                275                 280                 285

Glu Asn Leu Arg Gln Thr Glu Leu Lys Leu Thr Arg Lys Ala Ala
                290                 295                 300

Tyr Val Arg Tyr Phe Asn Ser Ser Ala Phe Phe Phe Ser Gly Phe
                305                 310                 315

Phe Val Val Phe Leu Ser Val Leu Pro Tyr Ala Leu Ile Lys Gly
                320                 325                 330

Ile Ile Leu Arg Lys Ile Phe Thr Thr Ile Ser Phe Cys Ile Val
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Leu Arg Met Ala Val Thr Arg Gln Phe Pro Trp Ala Val Gln Thr
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Gln Lys Gln Glu Tyr Lys Thr Leu Glu Tyr Asn Leu Thr Thr Thr
                380                 385                 390

Glu Val Val Met Glu Asn Val Thr Ala Phe Trp Glu Glu Gly Phe
                395                 400                 405

Gly Glu Leu Phe Glu Lys Ala Lys Gln Asn Asn Asn Asn Arg Lys
                410                 415                 420

Thr Ser Asn Gly Asp Asp Ser Leu Phe Phe Ser Asn Phe Ser Leu
                425                 430                 435

Leu Gly Thr Pro Val Leu Lys Asp Ile Asn Phe Lys Ile Glu Arg
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Gly Gln Leu Leu Ala Val Ala Gly Ser Thr Gly Ala Gly Lys Thr
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Ser Leu Leu Met Met Ile Met Gly Glu Leu Glu Pro Ser Glu Gly
                470                 475                 480

Lys Ile Lys His Ser Gly Arg Ile Ser Phe Cys Ser Gln Phe Ser
                485                 490                 495

Trp Ile Met Pro Gly Thr Ile Lys Glu Asn Ile Ile Phe Gly Val
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Ser Tyr Asp Glu Tyr Arg Tyr Arg Ser Val Ile Lys Ala Cys Gln
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Leu Glu Glu Asp Ile Ser Lys Phe Ala Glu Lys Asp Asn Ile Val
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Leu Gly Glu Gly Gly Ile Thr Leu Ser Gly Gly Gln Arg Ala Arg
                545                 550                 555

Ile Ser Leu Ala Arg Ala Val Tyr Lys Asp Ala Asp Leu Tyr Leu
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Leu Asp Ser Pro Phe Gly Tyr Leu Asp Val Leu Thr Glu Lys Glu
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Ile Phe Glu Ser Cys Val Cys Lys Leu Met Ala Asn Lys Thr Arg
                590                 595                 600

Ile Leu Val Thr Ser Lys Met Glu His Leu Lys Lys Ala Asp Lys
                605                 610                 615

Ile Leu Ile Leu Asn Glu Gly Ser Ser Tyr Phe Tyr Gly Thr Phe
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Ser Glu Leu Gln Asn Leu Gln Pro Asp Phe Ser Ser Lys Leu Met
                635                 640                 645
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Gly Cys Asp Ser Phe Asp Gln Phe Ser Ala Glu Arg Arg Asn Ser
650 655 660

Ile Leu Thr Glu Thr Leu His Arg Phe Ser Leu Glu Gly Asp Ala
665 670 675

Pro Val Ser Trp Thr Glu Thr Lys Lys Gln Ser Phe Lys Gln Thr
680 685 690

Gly Glu Phe Gly Glu Lys Arg Lys Asn Ser Ile Leu Asn Pro Ile
695 700 705

Asn Ser Ile Arg Lys Phe Ser Ile Val Gln Lys Thr Pro Leu Gln
710 715 720

Met Asn Gly Ile Glu Glu Asp Ser Asp Glu Pro Leu Glu Arg Arg
725 730 735

Leu Ser Leu Val Pro Asp Ser Glu Gln Gly Glu Ala Ile Leu Pro
740 745 750

Arg Ile Ser Val Ile Ser Thr Gly Pro Thr Leu Gln Ala Arg Arg
755 760 765

Arg Gln Ser Val Leu Asn Leu Met Thr His Ser Val Asn Gln Gly
770 775 780

Gln Asn Ile His Arg Lys Thr Thr Ala Ser Thr Arg Lys Val Ser
785 790 795

Leu Ala Pro Gln Ala Asn Leu Thr Glu Leu Asp Ile Tyr Ser Arg
800 805 810

Arg Leu Ser Gln Glu Thr Gly Leu Glu Ile Ser Glu Glu Ile Asn
815 820 825

Glu Glu Asp Leu Lys Glu Cys Leu Phe Asp Asp Met Glu Ser Ile
830 835 840

Pro Ala Val Thr Thr Trp Asn Thr Tyr Leu Arg Tyr Ile Thr Val
845 850 855

His Lys Ser Leu Ile Phe Val Leu Ile Trp Cys Leu Val Ile Phe
860 865 870

Leu Ala Glu Val Ala Ala Ser Leu Val Val Leu Trp Leu Leu Gly
875 880 885

Asn Thr Pro Leu Gln Asp Lys Gly Asn Ser Thr His Ser Arg Asn
890 895 900

Asn Ser Tyr Ala Val Ile Ile Thr Ser Thr Ser Ser Tyr Tyr Val
905 910 915

Phe Tyr Ile Tyr Val Gly Val Ala Asp Thr Leu Leu Ala Met Gly
920 925 930

Phe Phe Arg Gly Leu Pro Leu Val His Thr Leu Ile Thr Val Ser
935 940 945

Lys Ile Leu His His Lys Met Leu His Ser Val Leu Gln Ala Pro

950 955 960

Met Ser Thr Leu Asn Thr Leu Lys Ala Gly Gly Ile Leu Asn Arg
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Phe Ser Lys Asp Ile Ala Ile Leu Asp Asp Leu Leu Pro Leu Thr
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Ile Phe Asp Phe Ile Gln Leu Leu Leu Ile Val Ile Gly Ala Ile
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Ala Val Val Ala Val Leu Gln Pro Tyr Ile Phe Val Ala Thr Val
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Pro Val Ile Val Ala Phe Ile Met Leu Arg Ala Tyr Phe Leu Gln
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Thr Ser Gln Gln Leu Lys Gln Leu Glu Ser Glu Gly Arg Ser Pro
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Ile Phe Thr His Leu Val Thr Ser Leu Lys Gly Leu Trp Thr Leu
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Arg Ala Phe Gly Arg Gln Pro Tyr Phe Glu Thr Leu Phe His Lys
1070 1075 1080

Ala Leu Asn Leu His Thr Ala Asn Trp Phe Leu Tyr Leu Ser Thr
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Leu Arg Trp Phe Gln Met Arg Ile Glu Met Ile Phe Val Ile Phe
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Phe Ile Ala Val Thr Phe Ile Ser Ile Leu Thr Thr Gly Glu Gly
1115 1120 1125

Glu Gly Arg Val Gly Ile Ile Leu Thr Leu Ala Met Asn Ile Met
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Ser Thr Leu Gln Trp Ala Val Asn Ser Ser Ile Asp Val Asp Ser
1145 1150 1155

Leu Met Arg Ser Val Ser Arg Val Phe Lys Phe Ile Asp Met Pro
1160 1165 1170

Thr Glu Gly Lys Pro Thr Lys Ser Thr Lys Pro Tyr Lys Asn Gly
1175 1180 1185

Gln Leu Ser Lys Val Met Ile Ile Glu Asn Ser His Val Lys Lys
1190 1195 1200

Asp Asp Ile Trp Pro Ser Gly Gly Gln Met Thr Val Lys Asp Leu
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Thr Ala Lys Tyr Thr Glu Gly Gly Asn Ala Ile Leu Glu Asn Ile
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Ser Phe Ser Ile Ser Pro Gly Gln Arg Val Gly Leu Leu Gly Arg
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Thr Gly Ser Gly Lys Ser Thr Leu Leu Ser Ala Phe Leu Arg Leu
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Leu Asn Thr Glu Gly Glu Ile Gln Ile Asp Gly Val Ser Trp Asp
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Ser Ile Thr Leu Gln Gln Trp Arg Lys Ala Phe Gly Val Ile Pro
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Gln Lys Val Phe Ile Phe Ser Gly Thr Phe Arg Lys Asn Leu Asp
1295 1300 1305

Pro Tyr Glu Gln Trp Ser Asp Gln Glu Ile Trp Lys Val Ala Asp
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Glu Val Gly Leu Arg Ser Val Ile Glu Gln Phe Pro Gly Lys Leu
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Asp Phe Val Leu Val Asp Gly Gly Cys Val Leu Ser His Gly His
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Lys Gln Leu Met Cys Leu Ala Arg Ser Val Leu Ser Lys Ala Lys
1355 1360 1365

Ile Leu Leu Leu Asp Glu Pro Ser Ala His Leu Asp Pro Val Thr
1370 1375 1380

Tyr Gln Ile Ile Arg Arg Thr Leu Lys Gln Ala Phe Ala Asp Cys
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Thr Val Ile Leu Cys Glu His Arg Ile Glu Ala Met Leu Glu Cys
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Gln Gln Phe Leu Val Ile Glu Glu Asn Lys Val Arg Gln Tyr Asp
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Ser Ile Gln Lys Leu Leu Asn Glu Arg Ser Leu Phe Arg Gln Ala
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Ile Ser Pro Ser Asp Arg Val Lys Leu Phe Pro His Arg Asn Ser
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<212> PRT
<213> Homo sapien

<400> 52

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Ile	Thr	Val	Ala	Gly	Asn	Val	Val	Val	Cys	Leu	Ala	Val	Gly	Leu	
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Asn	Arg	Arg	Leu	Arg	Asn	Leu	Thr	Asn	Cys	Phe	Ile	Val	Ser	Leu	
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Ala	Ile	Thr	Asp	Leu	Leu	Leu	Gly	Leu	Leu	Val	Leu	Pro	Phe	Ser	
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Cys	Asn	Ile	Tyr	Thr	Ser	Leu	Asp	Val	Met	Leu	Cys	Thr	Ala	Ser	
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Asp	Gln	Ala	Lys	Arg	Ile	Asn	His	Ile	Ser	Ser	Trp	Lys	Ala	Ala	
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Thr	Ile	Arg	Glu	His	Lys	Ala	Thr	Val	Thr	Leu	Ala	Ala	Val	Met	
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Gly	Ala	Phe	Ile	Ile	Cys	Trp	Phe	Pro	Tyr	Phe	Thr	Ala	Phe	Val	
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Tyr Arg Gly Leu Arg Gly Asp Asp Ala Ile Asn Glu Val Leu Glu
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Ala Ile Val Leu Trp Leu Gly Tyr Ala Asn Ser Ala Leu Asn Pro
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Ile Leu Tyr Ala Ala Leu Asn Arg Asp Phe Arg Thr Gly Tyr Gln
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Gln Leu Phe Cys Cys Arg Leu Ala Asn Arg Asn Ser His Lys Thr
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Ser Leu Arg Ser Asn Ala Ser Gln Leu Ser Arg Thr Gln Ser Arg
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<211> 5512
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<400> 53
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<210> 54
<211> 1210
<212> PRT
<213> Homo sapien

<400> 54

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Cys Gln Gly Thr Ser Asn Lys Leu Thr Gln Leu Gly Thr Phe Glu
             35                  40                  45

Asp His Phe Leu Ser Leu Gln Arg Met Phe Asn Asn Cys Glu Val
             50                  55                  60

Val Leu Gly Asn Leu Glu Ile Thr Tyr Val Gln Arg Asn Tyr Asp
             65                  70                  75

Leu Ser Phe Leu Lys Thr Ile Gln Glu Val Ala Gly Tyr Val Leu
             80                  85                  90

Ile Ala Leu Asn Thr Val Glu Arg Ile Pro Leu Glu Asn Leu Gln
             95                 100                 105

Ile Ile Arg Gly Asn Met Tyr Tyr Glu Asn Ser Tyr Ala Leu Ala
            110                 115                 120

Val Leu Ser Asn Tyr Asp Ala Asn Lys Thr Gly Leu Lys Glu Leu
            125                 130                 135

Pro Met Arg Asn Leu Gln Glu Ile Leu His Gly Ala Val Arg Phe
            140                 145                 150

Ser Asn Asn Pro Ala Leu Cys Asn Val Glu Ser Ile Gln Trp Arg
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Asp Ile Val Ser Ser Asp Phe Leu Ser Asn Met Ser Met Asp Phe
            170                 175                 180

Gln Asn His Leu Gly Ser Cys Gln Lys Cys Asp Pro Ser Cys Pro
            185                 190                 195

Asn Gly Ser Cys Trp Gly Ala Gly Glu Glu Asn Cys Gln Lys Leu
            200                 205                 210

Thr Lys Ile Ile Cys Ala Gln Gln Cys Ser Gly Arg Cys Arg Gly
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Lys Ser Pro Ser Asp Cys Cys His Asn Gln Cys Ala Ala Gly Cys
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Thr Gly Pro Arg Glu Ser Asp Cys Leu Val Cys Arg Lys Phe Arg
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Ser Phe Gly Ala Thr Cys Val Lys Lys Cys Pro Arg Asn Tyr Val
                290                 295                 300

Val Thr Asp His Gly Ser Cys Val Arg Ala Cys Gly Ala Asp Ser
                305                 310                 315

Tyr Glu Met Glu Glu Asp Gly Val Arg Lys Cys Lys Lys Cys Glu
                320                 325                 330

Gly Pro Cys Arg Lys Val Cys Asn Gly Ile Gly Ile Gly Glu Phe
                335                 340                 345

Lys Asp Ser Leu Ser Ile Asn Ala Thr Asn Ile Lys His Phe Lys
                350                 355                 360

Asn Cys Thr Ser Ile Ser Gly Asp Leu His Ile Leu Pro Val Ala
                365                 370                 375

Phe Arg Gly Asp Ser Phe Thr His Thr Pro Pro Leu Asp Pro Gln
                380                 385                 390

Glu Leu Asp Ile Leu Lys Thr Val Lys Glu Ile Thr Gly Phe Leu
                395                 400                 405

Leu Ile Gln Ala Trp Pro Glu Asn Arg Thr Asp Leu His Ala Phe
                410                 415                 420

Glu Asn Leu Glu Ile Ile Arg Gly Arg Thr Lys Gln His Gly Gln
                425                 430                 435

Phe Ser Leu Ala Val Val Ser Leu Asn Ile Thr Ser Leu Gly Leu
                440                 445                 450

Arg Ser Leu Lys Glu Ile Ser Asp Gly Asp Val Ile Ile Ser Gly
                455                 460                 465

Asn Lys Asn Leu Cys Tyr Ala Asn Thr Ile Asn Trp Lys Lys Leu
                470                 475                 480

Phe Gly Thr Ser Gly Gln Lys Thr Lys Ile Ile Ser Asn Arg Gly
                485                 490                 495

Glu Asn Ser Cys Lys Ala Thr Gly Gln Val Cys His Ala Leu Cys
                500                 505                 510

Ser Pro Glu Gly Cys Trp Gly Pro Glu Pro Arg Asp Cys Val Ser
                515                 520                 525

Cys Arg Asn Val Ser Arg Gly Arg Glu Cys Val Asp Lys Cys Asn
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Leu Leu Glu Gly Glu Pro Arg Glu Phe Val Glu Asn Ser Glu Cys
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Ile Asp Gly Pro His Cys Val Lys Thr Cys Pro Ala Gly Val Met
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Gly Glu Asn Asn Thr Leu Val Trp Lys Tyr Ala Asp Ala Gly His
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Val Cys His Leu Cys His Pro Asn Cys Thr Tyr Gly Cys Thr Gly
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Pro Gly Leu Glu Gly Cys Pro Thr Asn Gly Pro Lys Ile Pro Ser
                635                 640                 645

Ile Ala Thr Gly Met Val Gly Ala Leu Leu Leu Leu Leu Val Val
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Ala Leu Gly Ile Gly Leu Phe Met Arg Arg Arg His Ile Val Arg
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Lys Arg Thr Leu Arg Arg Leu Leu Gln Glu Arg Glu Leu Val Glu
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Pro Leu Thr Pro Ser Gly Glu Ala Pro Asn Gln Ala Leu Leu Arg
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Ile Leu Lys Glu Thr Glu Phe Lys Lys Ile Lys Val Leu Gly Ser
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Gly Ala Phe Gly Thr Val Tyr Lys Gly Leu Trp Ile Pro Glu Gly
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Glu Lys Val Lys Ile Pro Val Ala Ile Lys Glu Leu Arg Glu Ala
                740                 745                 750

Thr Ser Pro Lys Ala Asn Lys Glu Ile Leu Asp Glu Ala Tyr Val
                755                 760                 765

Met Ala Ser Val Asp Asn Pro His Val Cys Arg Leu Leu Gly Ile
                770                 775                 780

Cys Leu Thr Ser Thr Val Gln Leu Ile Thr Gln Leu Met Pro Phe
                785                 790                 795

Gly Cys Leu Leu Asp Tyr Val Arg Glu His Lys Asp Asn Ile Gly
                800                 805                 810

Ser Gln Tyr Leu Leu Asn Trp Cys Val Gln Ile Ala Lys Gly Met
                815                 820                 825

Asn Tyr Leu Glu Asp Arg Arg Leu Val His Arg Asp Leu Ala Ala
                830                 835                 840

Arg Asn Val Leu Val Lys Thr Pro Gln His Val Lys Ile Thr Asp
                845                 850                 855

Phe Gly Leu Ala Lys Leu Leu Gly Ala Glu Glu Lys Glu Tyr His
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860 865 870

Ala Glu Gly Gly Lys Val Pro Ile Lys Trp Met Ala Leu Glu Ser
875 880 885

Ile Leu His Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Tyr
890 895 900

Gly Val Thr Val Trp Glu Leu Met Thr Phe Gly Ser Lys Pro Tyr
905 910 915

Asp Gly Ile Pro Ala Ser Glu Ile Ser Ser Ile Leu Glu Lys Gly
920 925 930

Glu Arg Leu Pro Gln Pro Pro Ile Cys Thr Ile Asp Val Tyr Met
935 940 945

Ile Met Val Lys Cys Trp Met Ile Asp Ala Asp Ser Arg Pro Lys
950 955 960

Phe Arg Glu Leu Ile Ile Glu Phe Ser Lys Met Ala Arg Asp Pro
965 970 975

Gln Arg Tyr Leu Val Ile Gln Gly Asp Glu Arg Met His Leu Pro
980 985 990

Ser Pro Thr Asp Ser Asn Phe Tyr Arg Ala Leu Met Asp Glu Glu
995 1000 1005

Asp Met Asp Asp Val Val Asp Ala Asp Glu Tyr Leu Ile Pro Gln
1010 1015 1020

Gln Gly Phe Phe Ser Ser Pro Ser Thr Ser Arg Thr Pro Leu Leu
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Ser Ser Leu Ser Ala Thr Ser Asn Asn Ser Thr Val Ala Cys Ile
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Asp Arg Asn Gly Leu Gln Ser Cys Pro Ile Lys Glu Asp Ser Phe
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Leu Gln Arg Tyr Ser Ser Asp Pro Thr Gly Ala Leu Thr Glu Asp
1070 1075 1080

Ser Ile Asp Asp Thr Phe Leu Pro Val Pro Glu Tyr Ile Asn Gln
1085 1090 1095

Ser Val Pro Lys Arg Pro Ala Gly Ser Val Gln Asn Pro Val Tyr
1100 1105 1110

His Asn Gln Pro Leu Asn Pro Ala Pro Ser Arg Asp Pro His Tyr
1115 1120 1125

Gln Asp Pro His Ser Thr Ala Val Gly Asn Pro Glu Tyr Leu Asn
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Thr Val Gln Pro Thr Cys Val Asn Ser Thr Phe Asp Ser Pro Ala
1145 1150 1155

His Trp Ala Gln Lys Gly Ser His Gln Ile Ser Leu Asp Asn Pro
1160 1165 1170

Asp Tyr Gln Gln Asp Phe Phe Pro Lys Glu Ala Lys Pro Asn Gly
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Ile Phe Lys Gly Ser Thr Ala Glu Asn Ala Glu Tyr Leu Arg Val
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Ala Pro Gln Ser Ser Glu Phe Ile Gly Ala
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<400> 55
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<212> PRT
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<400> 56

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Ala	Glu	Leu	Gly	Trp	Met	Val	His	Pro	Pro	Ser	Gly	Trp	Glu	Glu
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Val	Ser	Gly	Tyr	Asp	Glu	Asn	Met	Asn	Thr	Ile	Arg	Thr	Tyr	Gln
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Val	Cys	Asn	Val	Phe	Glu	Ser	Ser	Gln	Asn	Asn	Trp	Leu	Arg	Thr
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Lys	Phe	Ile	Arg	Arg	Arg	Gly	Ala	His	Arg	Ile	His	Val	Glu	Met
				80				85						90	
Lys	Phe	Ser	Val	Arg	Asp	Cys	Ser	Ser	Ile	Pro	Ser	Val	Pro	Gly
				95				100						105	
Ser	Cys	Lys	Glu	Thr	Phe	Asn	Leu	Tyr	Tyr	Tyr	Glu	Ala	Asp	Phe
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Asp	Ser	Ala	Thr	Lys	Thr	Phe	Pro	Asn	Trp	Met	Glu	Asn	Pro	Trp
				125				130						135	
Val	Lys	Val	Asp	Thr	Ile	Ala	Ala	Asp	Glu	Ser	Phe	Ser	Gln	Val
				140				145						150	
Asp	Leu	Gly	Gly	Arg	Val	Met	Lys	Ile	Asn	Thr	Glu	Val	Arg	Ser
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Phe Gly Pro Val Ser Arg Ser Gly Phe Tyr Leu Ala Phe Gln Asp
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Tyr Gly Gly Cys Met Ser Leu Ile Ala Val Arg Val Phe Tyr Arg
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Lys Cys Pro Arg Ile Ile Gln Asn Gly Ala Ile Phe Gln Glu Thr
                200                 205                 210

Leu Ser Gly Ala Glu Ser Thr Ser Leu Val Ala Ala Arg Gly Ser
                215                 220                 225

Cys Ile Ala Asn Ala Glu Glu Val Asp Val Pro Ile Lys Leu Tyr
                230                 235                 240

Cys Asn Gly Asp Gly Glu Trp Leu Val Pro Ile Gly Arg Cys Met
                245                 250                 255

Cys Lys Ala Gly Phe Glu Ala Val Glu Asn Gly Thr Val Cys Arg
                260                 265                 270

Gly Cys Pro Ser Gly Thr Phe Lys Ala Asn Gln Gly Asp Glu Ala
                275                 280                 285

Cys Thr His Cys Pro Ile Asn Ser Arg Thr Thr Ser Glu Gly Ala
                290                 295                 300

Thr Asn Cys Val Cys Arg Asn Gly Tyr Tyr Arg Ala Asp Leu Asp
                305                 310                 315

Pro Leu Asp Met Pro Cys Thr Thr Ile Pro Ser Ala Pro Gln Ala
                320                 325                 330

Val Ile Ser Ser Val Asn Glu Thr Ser Leu Met Leu Glu Trp Thr
                335                 340                 345

Pro Pro Arg Asp Ser Gly Gly Arg Glu Asp Leu Val Tyr Asn Ile
                350                 355                 360

Ile Cys Lys Ser Cys Gly Ser Gly Arg Gly Ala Cys Thr Arg Cys
                365                 370                 375

Gly Asp Asn Val Gln Tyr Ala Pro Arg Gln Leu Gly Leu Thr Glu
                380                 385                 390

Pro Arg Ile Tyr Ile Ser Asp Leu Leu Ala His Thr Gln Tyr Thr
                395                 400                 405

Phe Glu Ile Gln Ala Val Asn Gly Val Thr Asp Gln Ser Pro Phe
                410                 415                 420

Ser Pro Gln Phe Ala Ser Val Asn Ile Thr Thr Asn Gln Ala Ala
                425                 430                 435

Pro Ser Ala Val Ser Ile Met His Gln Val Ser Arg Thr Val Asp
                440                 445                 450

Ser Ile Thr Leu Ser Trp Ser Gln Pro Asp Gln Pro Asn Gly Val
                455                 460                 465
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Ile Leu Asp Tyr Glu Leu Gln Tyr Tyr Glu Lys Glu Leu Ser Glu
470 475 480

Tyr Asn Ala Thr Ala Ile Lys Ser Pro Thr Asn Thr Val Thr Val
485 490 495

Gln Gly Leu Lys Ala Gly Ala Ile Tyr Val Phe Gln Val Arg Ala
500 505 510

Arg Thr Val Ala Gly Tyr Gly Arg Tyr Ser Gly Lys Met Tyr Phe
515 520 525

Gln Thr Met Thr Glu Ala Glu Tyr Gln Thr Ser Ile Gln Glu Lys
530 535 540

Leu Pro Leu Ile Ile Gly Ser Ser Ala Ala Gly Leu Val Phe Leu
545 550 555

Ile Ala Val Val Val Ile Ala Ile Val Cys Asn Arg Arg Arg Gly
560 565 570

Phe Glu Arg Ala Asp Ser Glu Tyr Thr Asp Lys Leu Gln His Tyr
575 580 585

Thr Ser Gly His Met Thr Pro Gly Met Lys Ile Tyr Ile Asp Pro
590 595 600

Phe Thr Tyr Glu Asp Pro Asn Glu Ala Val Arg Glu Phe Ala Lys
605 610 615

Glu Ile Asp Ile Ser Cys Val Lys Ile Glu Gln Val Ile Gly Ala
620 625 630

Gly Glu Phe Gly Glu Val Cys Ser Gly His Leu Lys Leu Pro Gly
635 640 645

Lys Arg Glu Ile Phe Val Ala Ile Lys Thr Leu Lys Ser Gly Tyr
650 655 660

Thr Glu Lys Gln Arg Arg Asp Phe Leu Ser Glu Ala Ser Ile Met
665 670 675

Gly Gln Phe Asp His Pro Asn Val Ile His Leu Glu Gly Val Val
680 685 690

Thr Lys Ser Thr Pro Val Met Ile Ile Thr Glu Phe Met Glu Asn
695 700 705

Gly Ser Leu Asp Ser Phe Leu Arg Gln Asn Asp Gly Gln Phe Thr
710 715 720

Val Ile Gln Leu Val Gly Met Leu Arg Gly Ile Ala Ala Gly Met
725 730 735

Lys Tyr Leu Ala Asp Met Asn Tyr Val His Arg Asp Leu Ala Ala
740 745 750

Arg Asn Ile Leu Val Asn Ser Asn Leu Val Cys Lys Val Ser Asp
755 760 765

Phe Gly Leu Ser Arg Phe Leu Glu Asp Asp Thr Ser Asp Pro Thr

770 775 780

Tyr Thr Ser Ala Leu Gly Gly Lys Ile Pro Ile Arg Trp Thr Ala
785 790 795

Pro Glu Ala Ile Gln Tyr Arg Lys Phe Thr Ser Ala Ser Asp Val
800 805 810

Trp Ser Tyr Gly Ile Val Met Trp Glu Val Met Ser Tyr Gly Glu
815 820 825

Arg Pro Tyr Trp Asp Met Thr Asn Gln Asp Val Ile Asn Ala Ile
830 835 840

Glu Gln Asp Tyr Arg Leu Pro Pro Pro Met Asp Cys Pro Ser Ala
845 850 855

Leu His Gln Leu Met Leu Asp Cys Trp Gln Lys Asp Arg Asn His
860 865 870

Arg Pro Lys Phe Gly Gln Ile Val Asn Thr Leu Asp Lys Met Ile
875 880 885

Arg Asn Pro Asn Ser Leu Lys Ala Met Ala Pro Leu Ser Ser Gly
890 895 900

Ile Asn Leu Pro Leu Leu Asp Arg Thr Ile Pro Asp Tyr Thr Ser
905 910 915

Phe Asn Thr Val Asp Glu Trp Leu Glu Ala Ile Lys Met Gly Gln
920 925 930

Tyr Lys Glu Ser Phe Ala Asn Ala Gly Phe Thr Ser Phe Asp Val
935 940 945

Val Ser Gln Met Met Met Glu Asp Ile Leu Arg Val Gly Val Thr
950 955 960

Leu Ala Gly His Gln Lys Lys Ile Leu Asn Ser Ile Gln Val Met
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<212> DNA
<213> Homo sapien

<400> 57
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Leu	Gly	His	Gln	Glu	Phe	Ala	Arg	Pro	Ser	Arg	Gly	Tyr	Leu	Ala		
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Phe	Arg	Asp	Asp	Ser	Ile	Trp	Pro	Gln	Glu	Glu	Pro	Ala	Ile	Arg		
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Pro	Arg	Ser	Ser	Gln	Arg	Val	Pro	Pro	Met	Gly	Ile	Gln	His	Ser		
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Lys	Glu	Leu	Asn	Arg	Thr	Cys	Cys	Leu	Asn	Gly	Gly	Thr	Cys	Met		
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Leu	Gly	Ser	Phe	Cys	Ala	Cys	Pro	Pro	Ser	Phe	Tyr	Gly	Arg	Asn		
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Cys	Glu	His	Asp	Val	Arg	Lys	Glu	Asn	Cys	Gly	Ser	Val	Pro	His		
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Asp	Thr	Trp	Leu	Pro	Lys	Lys	Cys	Ser	Leu	Cys	Lys	Cys	Trp	His		
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<400> 59

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<210> 60
<211> 346
<212> PRT
<213> Homo sapien

<400> 60

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Asn	Leu	Glu	Pro	Val	Ser	Trp	Ser	Ser	Leu	Asn	Pro	Lys	Phe	Leu	
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Asp	Ile	Ile	Cys	Pro	Arg	Ala	Glu	Ala	Gly	Arg	Pro	Tyr	Glu	Tyr	
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Tyr	Lys	Leu	Tyr	Leu	Val	Arg	Pro	Glu	Gln	Ala	Ala	Ala	Cys	Ser	
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Thr	Val	Leu	Asp	Pro	Asn	Val	Leu	Val	Thr	Cys	Asn	Arg	Pro	Glu	
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Gln	Glu	Ile	Arg	Phe	Thr	Ile	Lys	Phe	Gln	Glu	Phe	Ser	Pro	Asn	
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Tyr	Met	Gly	Leu	Glu	Phe	Lys	Lys	His	His	Asp	Tyr	Tyr	Ile	Thr	
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Ser	Thr	Ser	Asn	Gly	Ser	Leu	Glu	Gly	Leu	Glu	Asn	Arg	Glu	Gly	
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Gly	Val	Cys	Arg	Thr	Arg	Thr	Met	Lys	Ile	Ile	Met	Lys	Val	Gly	
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Gln	Asp	Pro	Asn	Ala	Val	Thr	Pro	Glu	Gln	Leu	Thr	Thr	Ser	Arg	
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Pro	Ser	Lys	Glu	Ala	Asp	Asn	Thr	Val	Lys	Met	Ala	Thr	Gln	Ala	
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Pro	Gly	Ser	Arg	Gly	Ser	Leu	Gly	Asp	Ser	Asp	Gly	Lys	His	Glu	
				200				205						210	
Thr	Val	Asn	Gln	Glu	Glu	Lys	Ser	Gly	Pro	Gly	Ala	Ser	Gly	Gly	

215 220 225

Ser Ser Gly Asp Pro Asp Gly Phe Phe Asn Ser Lys Val Ala Leu
230 235 240

Phe Ala Ala Val Gly Ala Gly Cys Val Ile Phe Leu Leu Ile Ile
245 250 255

Ile Phe Leu Thr Val Leu Leu Leu Lys Leu Arg Lys Arg His Arg
260 265 270

Lys His Thr Gln Gln Arg Ala Ala Ala Leu Ser Leu Ser Thr Leu
275 280 285

Ala Ser Pro Lys Gly Gly Ser Gly Thr Ala Gly Thr Glu Pro Ser
290 295 300

Asp Ile Ile Ile Pro Leu Arg Thr Thr Glu Asn Asn Tyr Cys Pro
305 310 315

His Tyr Glu Lys Val Ser Gly Asp Tyr Gly His Pro Val Tyr Ile
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Val Gln Glu Met Pro Pro Gln Ser Pro Ala Asn Ile Tyr Tyr Lys
335 340 345

Val

<210> 61
<211> 2438
<212> DNA
<213> Homo sapien

<400> 61
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<210> 62
<211> 606
<212> PRT
<213> Homo sapien

<400> 62

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				20				25						30	
Leu	Leu	Ala	Leu	Gly	Thr	Arg	Gly	Gly	Cys	Ala	Ala	Pro	Ala	Pro	
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Ala	Pro	Arg	Ala	Glu	Asp	Leu	Ser	Leu	Gly	Val	Glu	Trp	Leu	Ser	
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Arg	Phe	Gly	Tyr	Leu	Pro	Pro	Ala	Asp	Pro	Thr	Thr	Gly	Gln	Leu	
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Gln	Thr	Gln	Glu	Glu	Leu	Ser	Lys	Ala	Ile	Thr	Ala	Met	Gln	Gln	
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Phe	Gly	Gly	Leu	Glu	Ala	Thr	Gly	Ile	Leu	Asp	Glu	Ala	Thr	Leu	
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Ala	Leu	Met	Lys	Thr	Pro	Arg	Cys	Ser	Leu	Pro	Asp	Leu	Pro	Val	
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Leu	Thr	Gln	Ala	Arg	Arg	Arg	Arg	Gln	Ala	Pro	Ala	Pro	Thr	Lys	
				125				130						135	
Trp	Asn	Lys	Arg	Asn	Leu	Ser	Trp	Arg	Val	Arg	Thr	Phe	Pro	Arg	
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Asp	Ser	Pro	Leu	Gly	His	Asp	Thr	Val	Arg	Ala	Leu	Met	Tyr	Tyr	
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Ala	Leu	Lys	Val	Trp	Ser	Asp	Ile	Ala	Pro	Leu	Asn	Phe	His	Glu	
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Val	Ala	Gly	Ser	Thr	Ala	Asp	Ile	Gln	Ile	Asp	Phe	Ser	Lys	Ala	
				185				190						195	
Asp	His	Asn	Asp	Gly	Tyr	Pro	Phe	Asp	Gly	Pro	Gly	Gly	Thr	Val	
				200				205						210	
Ala	His	Ala	Phe	Phe	Pro	Gly	His	His	His	Thr	Ala	Gly	Asp	Thr	
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His Phe Asp Asp Asp Glu Ala Trp Thr Phe Arg Ser Ser Asp Ala
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His Gly Met Asp Leu Phe Ala Val Ala Val His Glu Phe Gly His
                245                 250                 255

Ala Ile Gly Leu Ser His Val Ala Ala Ala His Ser Ile Met Arg
                260                 265                 270

Pro Tyr Tyr Gln Gly Pro Val Gly Asp Pro Leu Arg Tyr Gly Leu
                275                 280                 285

Pro Tyr Glu Asp Lys Val Arg Val Trp Gln Leu Tyr Gly Val Arg
                290                 295                 300

Glu Ser Val Ser Pro Thr Ala Gln Pro Glu Glu Pro Pro Leu Leu
                305                 310                 315

Pro Glu Pro Pro Asp Asn Arg Ser Ser Ala Pro Pro Arg Lys Asp
                320                 325                 330

Val Pro His Arg Cys Ser Thr His Phe Asp Ala Val Ala Gln Ile
                335                 340                 345

Arg Gly Glu Ala Phe Phe Phe Lys Gly Lys Tyr Phe Trp Arg Leu
                350                 355                 360

Thr Arg Asp Arg His Leu Val Ser Leu Gln Pro Ala Gln Met His
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Arg Phe Trp Arg Gly Leu Pro Leu His Leu Asp Ser Val Asp Ala
                380                 385                 390

Val Tyr Glu Arg Thr Ser Asp His Lys Ile Val Phe Phe Lys Gly
                395                 400                 405

Asp Arg Tyr Trp Val Phe Lys Asp Asn Asn Val Glu Glu Gly Tyr
                410                 415                 420

Pro Arg Pro Val Ser Asp Phe Ser Leu Pro Pro Gly Gly Ile Asp
                425                 430                 435

Ala Ala Phe Ser Trp Ala His Asn Asp Arg Thr Tyr Phe Phe Lys
                440                 445                 450

Asp Gln Leu Tyr Trp Arg Tyr Asp Asp His Thr Arg His Met Asp
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Pro Gly Tyr Pro Ala Gln Ser Pro Leu Trp Arg Gly Val Pro Ser
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Thr Leu Asp Asp Ala Met Arg Trp Ser Asp Gly Ala Ser Tyr Phe
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Phe Arg Gly Gln Glu Tyr Trp Lys Val Leu Asp Gly Glu Leu Glu
                500                 505                 510

Val Ala Pro Gly Tyr Pro Gln Ser Thr Ala Arg Asp Trp Leu Val
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Cys Gly Asp Ser Gln Ala Asp Gly Ser Val Ala Ala Gly Val Asp
530 535 540

Ala Ala Glu Gly Pro Arg Ala Pro Pro Gly Gln His Asp Gln Ser
545 550 555

Arg Ser Glu Asp Gly Tyr Glu Val Cys Ser Cys Thr Ser Gly Ala
560 565 570

Ser Ser Pro Pro Gly Ala Pro Gly Pro Leu Val Ala Ala Thr Met
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Ala Gln Ala Leu Thr Leu
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<210> 63
<211> 1009
<212> DNA
<213> Homo sapien

<400> 63
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ccatcggaat gggacagacc tacttgacat gcagatgcat gctctgctac 250

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aaaaaaaaa 1009

<210> 64
<211> 261
<212> PRT
<213> Homo sapien

<400> 64

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				20				25						30	
Phe	Val	Glu	Gly	Tyr	Phe	His	Gln	Phe	Phe	Leu	Thr	Glu	Lys	Glu
				35				40						45	
Ser	Pro	Leu	Leu	Thr	Gln	Glu	Thr	Gln	Thr	Gln	Leu	Leu	Gln	Gln
				50				55						60	
Phe	His	Arg	Asn	Gly	Thr	Asp	Leu	Leu	Asp	Met	Gln	Met	His	Ala
				65				70						75	
Leu	Leu	His	Gln	Pro	His	Cys	Gly	Val	Pro	Asp	Gly	Ser	Asp	Thr
				80				85						90	
Ser	Ile	Ser	Pro	Gly	Arg	Cys	Lys	Trp	Asn	Lys	His	Thr	Leu	Thr
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Tyr	Arg	Ile	Ile	Asn	Tyr	Pro	His	Asp	Met	Lys	Pro	Ser	Ala	Val
				110				115						120	
Lys	Asp	Ser	Ile	Tyr	Asn	Ala	Val	Ser	Ile	Trp	Ser	Asn	Val	Thr
				125				130						135	
Pro	Leu	Ile	Phe	Gln	Gln	Val	Gln	Asn	Gly	Asp	Ala	Asp	Ile	Lys
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Val	Ser	Phe	Trp	Gln	Trp	Ala	His	Glu	Asp	Gly	Trp	Pro	Phe	Asp
				155				160						165	
Gly	Pro	Gly	Gly	Ile	Leu	Gly	His	Ala	Phe	Leu	Pro	Asn	Ser	Gly
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Asn	Pro	Gly	Val	Val	His	Phe	Asp	Lys	Asn	Glu	His	Trp	Ser	Ala
				185				190						195	
Ser	Asp	Thr	Gly	Tyr	Asn	Leu	Phe	Leu	Val	Ala	Thr	His	Glu	Ile
				200				205						210	
Gly	His	Ser	Leu	Gly	Leu	Gln	His	Ser	Gly	Asn	Gln	Ser	Ser	Ile
				215				220						225	
Met	Tyr	Pro	Thr	Tyr	Trp	Tyr	His	Asp	Pro	Arg	Thr	Phe	Gln	Leu
				230				235						240	
Ser	Ala	Asp	Asp	Ile	Gln	Arg	Ile	Gln	His	Leu	Tyr	Gly	Glu	Lys
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Cys Ser Ser Asp Ile Pro
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<211> 3410
<212> DNA
<213> Homo sapien

<400> 65
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tatgggcggg aggtaggggc gcggctccgc gtgccagttg ggtgcccgcg 150

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<400> 68

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        35                  40                  45

Asn Glu Ala Ser Ser Glu Gly Arg Val Val Cys Tyr Tyr Thr Asn
    50                  55                  60

Trp Ser Val Tyr Arg Pro Gly Thr Ala Lys Phe Asn Pro Gln Asn
65                  70                  75

Ile Asn Pro Tyr Leu Cys Thr His Leu Val Tyr Ala Phe Gly Gly
            80                  85                  90

Phe Thr Lys Asp Asn Gln Met Lys Pro Phe Asp Lys Tyr Gln Asp
        95                  100                 105

Ile Glu Gln Gly Gly Tyr Ala Lys Phe Thr Gly Leu Lys Thr Tyr
    110                 115                 120

Asn Lys Gln Leu Lys Thr Met Ile Ala Ile Gly Gly Trp Asn Glu
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Ala Ser Ser Arg Phe Ser Pro Leu Val Ala Ser Asn Glu Arg Arg
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Gln Gln Phe Ile Lys Asn Ile Leu Lys Phe Leu Arg Gln Asn His
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Phe Asp Gly Ile Asp Leu Asp Trp Glu Tyr Pro Ala His Arg Glu
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Glu Leu Arg Ala Glu Phe Glu Arg Glu Ala Glu Lys Thr Gly Arg
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Trp Phe Asn Val Leu Thr Tyr Asp Phe His Ser Ser His Glu Pro
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Ser Val Asn His His Ala Pro Leu Tyr Ser Leu Glu Glu Asp Ser
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Tyr Tyr Leu Lys Ala Gly Ala Asp Arg Asp Lys Leu Val Leu Gly
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Asp Phe Arg Gly Thr Cys Asn Gly Lys Pro Tyr Pro Leu Ile Glu
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Leu Thr Glu Ala Glu Gly Ser Ser Leu Tyr Ile Gly Gly Arg Ala
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Phe Lys Cys Glu Glu Glu Gly Phe Phe Gln His Pro Arg Asp Cys
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Lys Lys Tyr Tyr Trp Cys Leu Asp Ser Gly Pro Ser Gly Leu Gly
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Tyr Glu Glu Asp Thr Asp Glu Leu Ser Pro Ser Lys Ser Thr Asp
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Ala Glu Glu Asp Pro Gln Val Ile Lys Glu Leu Ile Asp Leu Ile
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Arg Lys Val Gly Gly Val Glu Gln Leu Glu Lys His Leu Leu Arg
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Asn Lys Asp Gly Ser Ile Thr Leu Lys Glu Asn Ser Ala Thr Gly
695 700 705

Ala Ala Thr Thr Pro Ser Thr Ile Ser Lys Ser Leu Tyr Asp Arg
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Val Leu Ser Arg Pro Gly Thr Leu Asn Ser Phe Ser Arg Asn Arg
725 730 735

Phe Lys Ile Ser Glu Ala Ser Glu Thr Ser Thr Glu Pro Thr Thr
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830 835 840

Ser Ser Ile Thr Pro Ser Tyr Thr Ser Leu Arg Arg Ser Arg Pro
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860 865 870

Gln Gln Thr Gln Thr Gln Val Lys Ser Tyr Ala Thr Leu Ser Arg
875 880 885

Thr Arg Gly Arg Thr Thr Ser Ser Pro Glu Val Thr Glu Ala Ala
890 895 900

Pro Ser Ser Thr Thr Asn Arg Tyr Lys Tyr Phe Glu Arg Thr Arg

905 910 915

Pro Thr Lys Ser Ala Thr Ala Glu Asp Ser Glu Asp Pro Thr Glu
920 925 930

Asp Glu Glu Glu Glu Tyr Glu Asp Glu Gln Lys Asp Ile Val Thr
935 940 945

Val Gln Ser Lys Gln Ser Thr Asn Thr Arg Lys Tyr Ala Ser Ile
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1985 1990 1995

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Ser Gly Ser Thr Thr Thr Thr Thr Ala Asn Pro Ser Ala Asp Asn
2825 2830 2835

Glu Ile Asp Gln Gly Glu Thr Lys Arg Thr Thr Arg Arg Pro Ile
2840 2845 2850

Leu Ser Arg Arg Arg Phe Asn Ala Thr Ser Ile Thr Ala Thr Thr
2855 2860 2865

Thr Gly Ser Thr Asn Gly Asp Glu Ile Ser Thr Arg Arg Pro Tyr
2870 2875 2880

Ala Ala Leu Asn Arg Ser Arg Asn Arg Phe Thr Thr Pro Gln Thr
2885 2890 2895

Thr Thr Thr Asp Gly Gly Ala Asn Gly Asp Asp Asp Asp Tyr Asp
2900 2905 2910

Gly Glu Glu Glu Glu Gln Leu Ala Pro Pro Arg Ala Val Phe Leu
2915 2920 2925

Gln Thr Asn Arg His Arg Ala Leu Lys Pro Thr Pro Glu Asp Glu
2930 2935 2940

Glu Glu Gly Ala Ala Ala Val Pro Gly Arg Arg Pro Leu Asn Phe
2945 2950 2955

Ala Ala Arg Arg Thr Thr Ala Ala Pro Leu Arg Val Ser Ser Ser
2960 2965 2970

Thr Arg Arg Asn Leu Val Ala Ile Asn Arg Asn Leu Tyr His Arg
2975 2980 2985

Pro Glu Glu Asp Asn Glu Glu Glu Pro Glu Glu Glu Tyr Asp Glu
2990 2995 3000

Asn Glu Asp Gly Asp Asp Asp Gln Glu Glu Ser Val Asp Pro Gln
3005 3010 3015

Val Thr Ser Thr Thr Thr Arg Ser Arg Leu Asn Gln Leu Leu Ala
3020 3025 3030

Asn Arg Gln Arg Gln Pro Leu Arg Thr Thr Thr Glu Lys Gln Thr
3035 3040 3045

Glu Thr Asp Ser Asn Asp Thr Glu Thr Asp Ser Asp Asn Gly Asp
3050 3055 3060

Glu Asn Asp Asp Asp Glu Asp Asn Asp Ser Ser Val Glu Val Ser
3065 3070 3075

Asn Ser Asn His Thr Leu Lys His Ser Thr Ile Phe Gly Val Gly
3080 3085 3090

Thr Thr Asn Phe Asn Asn Leu Thr Asn Arg Ser Thr Ala Leu Asn
3095 3100 3105

Val Ala Ser Gln Arg Ser Asn Ser Thr Val Ala Asn Tyr Ile Asn
3110 3115 3120

Arg Phe Lys Ser Asn Ser Tyr Thr Asn Lys Asn Lys Pro Val Thr
3125 3130 3135

Val Thr Ala Asn Ile Lys Ala Asp Ser Thr Asp Asp Lys Asp Asn
3140 3145 3150

Asp Asn Asp Glu Asp Asp Asp Asp Asp Asp Asn Asp Asp Asp Asn
3155 3160 3165

Tyr Ala Ser Leu Glu Asn Glu Gly Lys Glu Lys Thr Ser Gly Ala
3170 3175 3180

Gly Leu Asn Ala Leu Gly Asn Asp Val Asn Ser Thr Arg Arg Phe
3185 3190 3195

Gln Asn Arg Tyr Gln Leu Ser Arg Thr Arg Gly Ser Thr Thr Thr
3200 3205 3210

Asn Thr Asn Pro Thr Thr Thr Gln Gln Pro Gln Thr Thr Ser Thr
3215 3220 3225

Ala Arg Arg Leu Ala Phe Gly Gly Arg Gln Arg Ala Gln Val Thr
3230 3235 3240

Lys Leu Thr Leu Val Asp Glu Gln Thr Glu Glu Thr Glu Thr Lys
3245 3250 3255

Gly Asp Ser Arg Glu Glu Glu Lys Glu Glu Glu Glu Glu Glu Asp
3260 3265 3270

Ser Asn Ala Thr Thr Thr Thr Thr Thr Thr Thr Thr Ser Arg Pro
3275 3280 3285

Thr Pro Lys Arg Ile Arg Val Leu Lys Phe Arg Arg Pro Leu Asn
3290 3295 3300

Ser Asn Ser Asn Ser Thr Ile Asn Val Asp Ser Thr Thr Asn Ser
3305 3310 3315

Ala Thr Asp Thr Asn Pro Asp Thr Thr Thr Ala Thr Pro Thr Thr
3320 3325 3330

Ala Gly Gln Ser Thr Thr Ser Asn Ser Asn Asn Asn Asn Asn Asn
3335 3340 3345

Thr Thr Ser Thr Thr Gly Asn Lys Arg Phe Arg Lys Ile Val Arg
3350 3355 3360

Lys Leu Arg Pro Val Asp Ser Ser Thr Ala Ala Ser Val Asp Asn
3365 3370 3375

Ser Asp Glu Thr Thr Arg Lys Pro Phe Val Pro Ser His Thr Arg
3380 3385 3390

Phe Ala Asp Gln Asp Asn Asp Leu Val Asn Leu Arg Gln Arg Ile
3395 3400 3405

Lys Glu Gln Gln Ala Arg Gly Glu Pro Gln Asp Gly Val Ile Ser
3410 3415 3420

Asn Arg Phe Lys Thr Leu Gly Gln Lys Asp Asp Gln Asp Val Ser
3425 3430 3435

Glu Leu Gln Lys Leu Arg Asp Lys Val Lys Ala Glu Gln Ala Arg
3440 3445 3450

Gly Glu Gly Glu Gln Gly Val Ile Asn Asp Arg Leu Lys Lys Leu
3455 3460 3465

Leu Ala Glu Lys Gly Ser Ser Ile Ser Ser Gln Arg Glu Glu Ser
3470 3475 3480

Ser Thr Asp Asp Asp Ser Ser Ser Val Ser Ser Ala Arg Pro Phe
3485 3490 3495

Phe Lys Arg Lys Leu Val Ala Arg Arg Pro Tyr Thr Pro Pro Ser
3500 3505 3510

Ala Ser Gly Gly Thr Thr Lys Ala Pro Leu Thr Phe Ser Thr Ser
3515 3520 3525

Arg Pro Thr Ala Lys Phe Val Arg Arg Lys Asn Gly Arg Phe Asp
3530 3535 3540

Pro Phe Asn Ser Ser Val Arg Asn Arg Gly Glu Gly Phe Val Arg
3545 3550 3555

Ser Asp Pro Arg Gly Ser Arg Leu Pro Gly Thr Asp Arg Phe Lys
3560 3565 3570

Ser Gln Gly Asn Ser Glu Asp Asp Asp Glu Val Glu Glu Arg His
3575 3580 3585

Glu Gln Pro Leu Gln Asn Gln Phe Ala Thr Thr Leu Arg Arg Pro
3590 3595 3600

Phe Val Pro Lys Thr Arg Pro Val Leu Asp Lys Ser Lys Pro Glu
3605 3610 3615

Gln Glu Asp Gly Ala Glu Glu Ser Glu Glu Glu Asp Glu Glu Glu
3620 3625 3630

Asp Ser Glu Glu Glu Gly Asp Glu Glu Glu Asp Glu Glu Glu Glu
3635 3640 3645

Asp Val Lys Pro Gly Gly Glu Glu Asp Asn Ala Gln Glu Asp Asn

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                3650                3655                3660

Lys Pro Lys Phe Asn Ser Pro Tyr Lys Pro Lys Asp Asn Arg Ala
                3665                3670                3675

Pro Pro Gly Ser Arg Pro Thr Phe Gly Thr Thr Gly Ser Gly Ser
                3680                3685                3690

Pro Pro Thr Ala Ser Gly Asn Val Pro Tyr Asn Pro Arg Asn Arg
                3695                3700                3705

Pro Ser Asn Ser Ala Asn Gly Asn Ser Thr Pro Ser Asn Arg Phe
                3710                3715                3720

Gly Thr Thr Lys Arg Pro Arg Val Val Asn Arg Pro Pro Gly Val
                3725                3730                3735

Ala Ser Pro Asn Leu Thr Leu Lys Pro Val Ala Ser Asp Tyr Glu
                3740                3745                3750

Arg Thr Thr Pro Leu Thr Pro Leu Lys Pro Ala Pro Phe Ile Pro
                3755                3760                3765

Ser Asn Asn Arg Ser Tyr Glu Arg Lys Tyr Ser Gly Pro Ser Thr
                3770                3775                3780

Glu Ala Ala Glu Thr Ala Ser Glu Asn Ser Leu Ile Glu Asp Leu
                3785                3790                3795

Asn Ile Asp Ala Leu Asn Ala Arg Asn Lys Lys Ile Phe Asp Lys
                3800                3805                3810

His Ser Lys Lys His Pro Ala Leu Lys Pro Lys Val Val Lys Val
                3815                3820                3825

Glu Ser Glu Thr Gly Leu Glu Val Glu Ala Gly Thr Glu Val Ala
                3830                3835                3840

Val Glu Asp Glu Thr Thr Glu Glu Gln Gln Gln Glu Gln Gly Phe
                3845                3850                3855

Val Thr Thr Thr Pro Ser Thr Pro Pro Ser Pro Ala Pro Pro Ser
                3860                3865                3870

Thr Gln Ser Asp Thr Ala Thr Thr Thr Asp Thr Pro Pro Glu Thr
                3875                3880                3885

Glu Thr Glu Thr Glu Thr Glu Thr Glu Thr Glu Thr Glu Thr Glu
                3890                3895                3900

Asn Val Thr Glu Ile Glu Thr Ala Thr Asn Ala Asn Glu Ala Thr
                3905                3910                3915

Ser Ile Asn Ser Gln Asp Gln Thr Ile Ser Ser Thr Thr Gln Ala
                3920                3925                3930

Pro Pro Pro Ala Thr Thr Leu Leu His Val Phe Thr Leu Leu Glu
                3935                3940                3945

Gly Glu Gly Gln Glu Glu Glu Pro Thr Thr Arg Lys Pro Thr Val
                3950                3955                3960
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Arg Leu Tyr Pro Thr Ile Gln Thr Glu Val Val Pro Lys His Lys
3965 3970 3975

Leu Ile Glu Ile Asn Arg Ile Val Glu Ile Asn Ser Lys Gln Ala
3980 3985 3990

Lys Ala Ala Gln Arg Lys Ser Lys Ala Asn His Asp Phe Ser Thr
3995 4000 4005

Leu Met Val Glu Ser Leu Pro His Val Glu Gln Leu Gly Glu Ile
4010 4015 4020

Ser Val Val Lys Tyr Val His Leu Val Asp Gly Ser Asp Ile Gln
4025 4030 4035

Ile Asn Asp Gly His Ser Thr Val Ala Asp Tyr Thr Pro Thr Glu
4040 4045 4050

Pro Thr Ser Ala Ala Glu Arg Pro Val Ser Leu Pro Val Arg Asn
4055 4060 4065

Ser Leu Pro Glu Thr Glu Gly Ala Asp Thr Asp Arg Ser Gly Lys
4070 4075 4080

Ser Leu Val Pro Glu Val Leu Thr Ala Ala Leu Glu Thr Ser Thr
4085 4090 4095

Ile Ser Leu Glu Gly Leu Phe Asp Ser Ala Arg Lys Gly Lys Gln
4100 4105 4110

Leu Ser Ser Asn Thr Ile Ile Gly Glu Thr Glu Glu Ser Thr Thr
4115 4120 4125

Ile Gly Ser Ser Ser Ser Leu Ala Ser Glu Thr Gly Glu Thr Thr
4130 4135 4140

Thr Pro Ala Pro Thr Tyr Val Arg Pro Ile Val Pro Leu Leu Arg
4145 4150 4155

Pro Glu Ser Asn Glu Ser Ser Pro Leu Val Ile Ser Ile Ala Asn
4160 4165 4170

Leu Asp Gln Val Ile Leu Ser Lys Val Gln Lys Ser Leu Ala Glu
4175 4180 4185

Asn Ser Gln Thr Thr Val Ala Pro Glu Ala Ala Ser Asp Ser Asn
4190 4195 4200

Ser Ala Phe Ser Val Arg Gln Pro Leu Val Val Gln Ala Pro Ile
4205 4210 4215

Ser Asn Gly Ala Gln Glu Ile Asp Gln Asp Thr Leu Asn Thr Gln
4220 4225 4230

Asp Gln Thr Ile Asn Gly Ala Ile Ser Val Lys Thr Asn Pro Ile
4235 4240 4245

Ile Gln Thr Thr Thr Asn Arg Pro Asn Asp Asp Gln Val Ala Glu
4250 4255 4260

Glu Thr Thr Ile Phe Ser Ile Glu Thr Ala Thr Glu Pro Glu Leu
4265 4270 4275

Asn Thr Gln Thr Thr Ile Pro Lys Thr Glu Ala Asn Ser Glu Thr
4280 4285 4290

Val Thr Ala Met Pro Ile Gly Ala Val Ile Met Gly Gln Phe Gly
4295 4300 4305

Leu Asn Thr Gln Ser Thr Thr Ala Val Asp Asn Asp Asn Gln Leu
4310 4315 4320

Asn Ala Gln Thr Thr Ser Thr Ile Ser Ser Gly Ala Val Ser Ser
4325 4330 4335

Val Ala Ile Gly Gly Asn Thr Gln Thr Ala Asn Ala Asp Asn Ala
4340 4345 4350

Arg Gln Glu Asn Thr Gln Ser Thr Gly Thr Ile Thr Ser Glu Ile
4355 4360 4365

Ser Ser Gly Ala Ile Ser Ser Asp Asn His Asn His Ile Gly Thr
4370 4375 4380

Gln Thr Thr Ala Thr Ile Asp Ser Ser Ser Glu Thr Thr Pro Thr
4385 4390 4395

Gln Ile Ser Thr Thr Ile Ser Ser Gly Ala Ile Ser Gly His Ile
4400 4405 4410

Asp Gly Ser Ile Asn Leu Asn Thr Gln Thr Asn Thr Thr Ile Ser
4415 4420 4425

Thr Asn Asn Thr Thr Thr Ser Thr Thr Asp Val Gly Ser Lys Val
4430 4435 4440

Ser Glu Ala Val Ser Phe Ser Ser Glu Thr His Val Val His Arg
4445 4450 4455

Lys Lys Met Gly Arg Lys Gly Arg Gly Arg Arg Leu Arg Asn Arg
4460 4465 4470

Lys Thr Thr Thr Thr Thr Thr Thr Thr Glu Thr Pro Thr Thr Thr
4475 4480 4485

Glu Ala Thr Phe Asp Asp Thr Thr Thr Val Val Pro Glu
4490 4495

<210> 69
<211> 782
<212> DNA
<213> Homo sapien

<400> 69
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agagaaccca ccatggcccc ctttgagccc ctggcttctg gcatcctgtt 100

gttgctgtgg ctgatagccc ccagcagggc ctgcacctgt gtcccacccc 150

acccacagac ggccttctgc aattccgacc tcgtcatcag ggccaagttc 200

gtggggacac cagaagtcaa ccagaccacc ttataccagc gttatgagat 250

caagatgacc aagatgtata aagggttcca agccttaggg gatgccgctg 300

acatccggtt cgtctacacc cccgccatgg agagtgtctg cggatacttc 350

cacaggtccc acaaccgcag cgaggagttt ctcattgctg gaaaactgca 400

ggatggactc ttgcacatca ctacctgcag tttcgtggct ccctggaaca 450

gcctgagctt agctcagcgc cggggcttca ccaagaccta cactgttggc 500

tgtgaggaat gcacagtgtt tccctgttta tccatcccct gcaaactgca 550

gagtggcact cattgcttgt ggacggacca gctcctccaa ggctctgaaa 600

agggcttcca gtcccgtcac cttgcctgcc tgcctcggga gccagggctg 650

tgcacctggc agtccctgcg gtcccagata gcctgaatcc tgcccggagt 700

ggaactgaag cctgcacagt gtccaccctg ttcccactcc catctttctt 750

ccggacaatg aaataaagag ttaccaccca gc 782

<210> 70
<211> 207
<212> PRT
<213> Homo sapien

<400> 70

Met	Ala	Pro	Phe	Glu	Pro	Leu	Ala	Ser	Gly	Ile	Leu	Leu	Leu	Leu	
1				5				10						15	
Trp	Leu	Ile	Ala	Pro	Ser	Arg	Ala	Cys	Thr	Cys	Val	Pro	Pro	His	
				20				25						30	
Pro	Gln	Thr	Ala	Phe	Cys	Asn	Ser	Asp	Leu	Val	Ile	Arg	Ala	Lys	
				35				40						45	
Phe	Val	Gly	Thr	Pro	Glu	Val	Asn	Gln	Thr	Thr	Leu	Tyr	Gln	Arg	
				50				55						60	
Tyr	Glu	Ile	Lys	Met	Thr	Lys	Met	Tyr	Lys	Gly	Phe	Gln	Ala	Leu	
				65				70						75	
Gly	Asp	Ala	Ala	Asp	Ile	Arg	Phe	Val	Tyr	Thr	Pro	Ala	Met	Glu	
				80				85						90	
Ser	Val	Cys	Gly	Tyr	Phe	His	Arg	Ser	His	Asn	Arg	Ser	Glu	Glu	
				95				100						105	
Phe	Leu	Ile	Ala	Gly	Lys	Leu	Gln	Asp	Gly	Leu	Leu	His	Ile	Thr	
				110				115						120	
Thr	Cys	Ser	Phe	Val	Ala	Pro	Trp	Asn	Ser	Leu	Ser	Leu	Ala	Gln	
				125				130						135	
Arg	Arg	Gly	Phe	Thr	Lys	Thr	Tyr	Thr	Val	Gly	Cys	Glu	Glu	Cys	
				140				145						150	

Thr Val Phe Pro Cys Leu Ser Ile Pro Cys Lys Leu Gln Ser Gly
155 160 165

Thr His Cys Leu Trp Thr Asp Gln Leu Leu Gln Gly Ser Glu Lys
170 175 180

Gly Phe Gln Ser Arg His Leu Ala Cys Leu Pro Arg Glu Pro Gly
185 190 195

Leu Cys Thr Trp Gln Ser Leu Arg Ser Gln Ile Ala
200 205

<210> 71
<211> 481
<212> DNA
<213> Homo sapien

<400> 71
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tgggccctag gcttctgggc gggatgatga cattgagatt ctggcccctg 100

tatccacagg tgatggagac ctgccagatg tccaggagcc cccgagagcg 150

gctgttgctg cttttgctgc tgctactgct tgtgccctgg ggcactggcc 200

ctgcctcagg tgttgccctg cccctcgctg gtgtgttcag cctccgcgcc 250

ccgggtcgtg cctgggcggg cttgggtagc cccctgtctc ggcgcagcct 300

ggcgctagct gacgacgcgg cctttcggga gcgcgcgcgc ctgctggccg 350

ccctggagcg ccgccgctgg ctggactctt acatgcagaa gctgttgcta 400

ctggacgcgc cctgagccta ataaagagcc tgtcgcactg cgactgcgcc 450

tctttgctgc gccactctct tgtgggtgtg t 481

<210> 72
<211> 100
<212> PRT
<213> Homo sapien

<400> 72
Met Glu Thr Cys Gln Met Ser Arg Ser Pro Arg Glu Arg Leu Leu
1 5 10 15

Leu Leu Leu Leu Leu Leu Leu Leu Val Pro Trp Gly Thr Gly Pro
20 25 30

Ala Ser Gly Val Ala Leu Pro Leu Ala Gly Val Phe Ser Leu Arg
35 40 45

Ala Pro Gly Arg Ala Trp Ala Gly Leu Gly Ser Pro Leu Ser Arg
50 55 60

Arg Ser Leu Ala Leu Ala Asp Asp Ala Ala Phe Arg Glu Arg Ala
65 70 75

Arg Leu Leu Ala Ala Leu Glu Arg Arg Arg Trp Leu Asp Ser Tyr
80 85 90

Met Gln Lys Leu Leu Leu Leu Asp Ala Pro
95 100

<210> 73
<211> 2974
<212> DNA
<213> Homo sapien

<400> 73
ctcagggcag agggaggaag gacagcagac cagacagtca cagcagcctt 50

gacaaaacgt tcctggaact caagctcttc tccacagagg aggacagagc 100

agacagcaga gaccatggag tctccctcgg cccctcccca cagatggtgc 150

atcccctggc agaggctcct gctcacagcc tcacttctaa ccttctggaa 200

cccgcccacc actgccaagc tcactattga atccacgccg ttcaatgtcg 250

cagaggggaa ggaggtgctt ctacttgtcc acaatctgcc ccagcatctt 300

tttggctaca gctggtacaa aggtgaaaga gtggatggca accgtcaaat 350

tataggatat gtaataggaa ctcaacaagc taccccaggg cccgcataca 400

gtggtcgaga gataatatac cccaatgcat ccctgctgat ccagaacatc 450

atccagaatg acacaggatt ctacacccta cacgtcataa agtcagatct 500

tgtgaatgaa gaagcaactg gccagttccg ggtatacccg gagctgccca 550

agccctccat ctccagcaac aactccaaac ccgtggagga caaggatgct 600

gtggccttca cctgtgaacc tgagactcag gacgcaacct acctgtggtg 650

ggtaaacaat cagagcctcc cggtcagtcc caggctgcag ctgtccaatg 700

gcaacaggac cctcactcta ttcaatgtca caagaaatga cacagcaagc 750

tacaaatgtg aaacccagaa cccagtgagt gccaggcgca gtgattcagt 800

catcctgaat gtcctctatg gcccggatgc ccccaccatt tcccctctaa 850

acacatctta cagatcaggg gaaaatctga acctctcctg ccacgcagcc 900

tctaacccac ctgcacagta ctcttggttt gtcaatggga ctttccagca 950

atccacccaa gagctcttta tccccaacat cactgtgaat aatagtggat 1000

cctatacgtg ccaagcccat aactcagaca ctggcctcaa taggaccaca 1050

gtcacgacga tcacagtcta tgcagagcca cccaaaccct tcatcaccag 1100

caacaactcc aaccccgtgg aggatgagga tgctgtagcc ttaacctgtg 1150

aacctgagat tcagaacaca acctacctgt ggtgggtaaa taatcagagc 1200

ctcccggtca gtcccaggct gcagctgtcc aatgacaaca ggaccctcac 1250

tctactcagt gtcacaagga atgatgtagg accctatgag tgtggaatcc 1300

agaacgaatt aagtgttgac cacagcgacc cagtcatcct gaatgtcctc 1350

tatggcccag acgaccccac catttccccc tcatacacct attaccgtcc 1400

aggggtgaac ctcagcctct cctgccatgc agcctctaac ccacctgcac 1450

agtattcttg gctgattgat gggaacatcc agcaacacac acaagagctc 1500

tttatctcca acatcactga gaagaacagc ggactctata cctgccaggc 1550

caataactca gccagtggcc acagcaggac tacagtcaag acaatcacag 1600

tctctgcgga gctgcccaag ccctccatct ccagcaacaa ctccaaaccc 1650

gtggaggaca aggatgctgt ggccttcacc tgtgaacctg aggctcagaa 1700

cacaacctac ctgtggtggg taaatggtca gagcctccca gtcagtccca 1750

ggctgcagct gtccaatggc aacaggaccc tcactctatt caatgtcaca 1800

agaaatgacg caagagccta tgtatgtgga atccagaact cagtgagtgc 1850

aaaccgcagt gacccagtca ccctggatgt cctctatggg ccggacaccc 1900

ccatcatttc ccccccagac tcgtcttacc tttcgggagc gaacctcaac 1950

ctctcctgcc actcggcctc taacccatcc ccgcagtatt cttggcgtat 2000

caatgggata ccgcagcaac acacacaagt tctctttatc gccaaaatca 2050

cgccaaataa taacgggacc tatgcctgtt ttgtctctaa cttggctact 2100

ggccgcaata attccatagt caagagcatc acagtctctg catctggaac 2150

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tggttggggt tgctctgata tagcagccct ggtgtagttt cttcatttca 2250

ggaagactga cagttgtttt gcttcttcct taaagcattt gcaacagcta 2300

cagtctaaaa ttgcttcttt accaaggata tttacagaaa agactctgac 2350

cagagatcga gaccatccta gccaacatcg tgaaacccca tctctactaa 2400

aaatacaaaa atgagctggg cttggtggcg cgcacctgta gtcccagtta 2450

ctcgggaggc tgaggcagga gaatcgcttg aacccgggag gtggagattg 2500

cagtgagccc agatcgcacc actgcactcc agtctggcaa cagagcaaga 2550

ctccatctca aaaagaaaag aaaagaagac tctgacctgt actcttgaat 2600

acaagtttct gataccactg cactgtctga gaatttccaa aactttaatg 2650

aactaactga cagcttcatg aaactgtcca ccaagatcaa gcagagaaaa 2700

taattaattt catgggacta aatgaactaa tgaggattgc tgattcttta 2750

aatgtcttgt ttcccagatt tcaggaaact ttttttcttt taagctatcc 2800

actcttacag caatttgata aaatatactt ttgtgaacaa aaattgagac 2850

atttacattt tctccctatg tggtcgctcc agacttggga aactattcat 2900

gaatatttat attgtatggt aatatagtta ttgcacaagt tcaataaaaa 2950

tctgctcttt gtataacaga aaaa 2974

<210> 74
<211> 702
<212> PRT
<213> Homo sapien

<400> 74

Met	Glu	Ser	Pro	Ser	Ala	Pro	Pro	His	Arg	Trp	Cys	Ile	Pro	Trp
1				5				10						15	
Gln	Arg	Leu	Leu	Leu	Thr	Ala	Ser	Leu	Leu	Thr	Phe	Trp	Asn	Pro
				20				25						30	
Pro	Thr	Thr	Ala	Lys	Leu	Thr	Ile	Glu	Ser	Thr	Pro	Phe	Asn	Val
				35				40						45	
Ala	Glu	Gly	Lys	Glu	Val	Leu	Leu	Leu	Val	His	Asn	Leu	Pro	Gln
				50				55						60	
His	Leu	Phe	Gly	Tyr	Ser	Trp	Tyr	Lys	Gly	Glu	Arg	Val	Asp	Gly
				65				70						75	
Asn	Arg	Gln	Ile	Ile	Gly	Tyr	Val	Ile	Gly	Thr	Gln	Gln	Ala	Thr
				80				85						90	
Pro	Gly	Pro	Ala	Tyr	Ser	Gly	Arg	Glu	Ile	Ile	Tyr	Pro	Asn	Ala
				95				100						105	
Ser	Leu	Leu	Ile	Gln	Asn	Ile	Ile	Gln	Asn	Asp	Thr	Gly	Phe	Tyr
				110				115						120	
Thr	Leu	His	Val	Ile	Lys	Ser	Asp	Leu	Val	Asn	Glu	Glu	Ala	Thr
				125				130						135	
Gly	Gln	Phe	Arg	Val	Tyr	Pro	Glu	Leu	Pro	Lys	Pro	Ser	Ile	Ser
				140				145						150	
Ser	Asn	Asn	Ser	Lys	Pro	Val	Glu	Asp	Lys	Asp	Ala	Val	Ala	Phe
				155				160						165	
Thr	Cys	Glu	Pro	Glu	Thr	Gln	Asp	Ala	Thr	Tyr	Leu	Trp	Trp	Val
				170				175						180	
Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln	Leu	Ser	Asn
				185				190						195	
Gly	Asn	Arg	Thr	Leu	Thr	Leu	Phe	Asn	Val	Thr	Arg	Asn	Asp	Thr
				200				205						210	
Ala	Ser	Tyr	Lys	Cys	Glu	Thr	Gln	Asn	Pro	Val	Ser	Ala	Arg	Arg
				215				220						225	
Ser	Asp	Ser	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Ala	Pro
				230				235						240	

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Thr Ile Ser Pro Leu Asn Thr Ser Tyr Arg Ser Gly Glu Asn Leu
                245                 250                 255

Asn Leu Ser Cys His Ala Ala Ser Asn Pro Pro Ala Gln Tyr Ser
                260                 265                 270

Trp Phe Val Asn Gly Thr Phe Gln Gln Ser Thr Gln Glu Leu Phe
                275                 280                 285

Ile Pro Asn Ile Thr Val Asn Asn Ser Gly Ser Tyr Thr Cys Gln
                290                 295                 300

Ala His Asn Ser Asp Thr Gly Leu Asn Arg Thr Thr Val Thr Thr
                305                 310                 315

Ile Thr Val Tyr Ala Glu Pro Pro Lys Pro Phe Ile Thr Ser Asn
                320                 325                 330

Asn Ser Asn Pro Val Glu Asp Glu Asp Ala Val Ala Leu Thr Cys
                335                 340                 345

Glu Pro Glu Ile Gln Asn Thr Thr Tyr Leu Trp Trp Val Asn Asn
                350                 355                 360

Gln Ser Leu Pro Val Ser Pro Arg Leu Gln Leu Ser Asn Asp Asn
                365                 370                 375

Arg Thr Leu Thr Leu Leu Ser Val Thr Arg Asn Asp Val Gly Pro
                380                 385                 390

Tyr Glu Cys Gly Ile Gln Asn Glu Leu Ser Val Asp His Ser Asp
                395                 400                 405

Pro Val Ile Leu Asn Val Leu Tyr Gly Pro Asp Asp Pro Thr Ile
                410                 415                 420

Ser Pro Ser Tyr Thr Tyr Tyr Arg Pro Gly Val Asn Leu Ser Leu
                425                 430                 435

Ser Cys His Ala Ala Ser Asn Pro Pro Ala Gln Tyr Ser Trp Leu
                440                 445                 450

Ile Asp Gly Asn Ile Gln Gln His Thr Gln Glu Leu Phe Ile Ser
                455                 460                 465

Asn Ile Thr Glu Lys Asn Ser Gly Leu Tyr Thr Cys Gln Ala Asn
                470                 475                 480

Asn Ser Ala Ser Gly His Ser Arg Thr Thr Val Lys Thr Ile Thr
                485                 490                 495

Val Ser Ala Glu Leu Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser
                500                 505                 510

Lys Pro Val Glu Asp Lys Asp Ala Val Ala Phe Thr Cys Glu Pro
                515                 520                 525

Glu Ala Gln Asn Thr Thr Tyr Leu Trp Trp Val Asn Gly Gln Ser
                530                 535                 540
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Leu Pro Val Ser Pro Arg Leu Gln Leu Ser Asn Gly Asn Arg Thr
545 550 555

Leu Thr Leu Phe Asn Val Thr Arg Asn Asp Ala Arg Ala Tyr Val
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Cys Gly Ile Gln Asn Ser Val Ser Ala Asn Arg Ser Asp Pro Val
575 580 585

Thr Leu Asp Val Leu Tyr Gly Pro Asp Thr Pro Ile Ile Ser Pro
590 595 600

Pro Asp Ser Ser Tyr Leu Ser Gly Ala Asn Leu Asn Leu Ser Cys
605 610 615

His Ser Ala Ser Asn Pro Ser Pro Gln Tyr Ser Trp Arg Ile Asn
620 625 630

Gly Ile Pro Gln Gln His Thr Gln Val Leu Phe Ile Ala Lys Ile
635 640 645

Thr Pro Asn Asn Asn Gly Thr Tyr Ala Cys Phe Val Ser Asn Leu
650 655 660

Ala Thr Gly Arg Asn Asn Ser Ile Val Lys Ser Ile Thr Val Ser
665 670 675

Ala Ser Gly Thr Ser Pro Gly Leu Ser Ala Gly Ala Thr Val Gly
680 685 690

Ile Met Ile Gly Val Leu Val Gly Val Ala Leu Ile
695 700

<210> 75
<211> 2249
<212> DNA
<213> Homo sapien

<400> 75
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acagcctcac ttctaacctt ctggaaccca cccaccactg ccaagctcac 150

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gaaagagtgg atggcaacag tctaattgta ggatatgtaa taggaactca 300

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atgcatccct gctgatccag aacgtcaccc agaatgacac aggattctat 400

accctacaag tcataaagtc agatcttgtg aatgaagaag caaccggaca 450

gttccatgta tacccggagc tgcccaagcc ctccatctcc agcaacaact 500

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caactgaaat gttaaggaag aagatagatc caaaaaaaaa aaaaaaaaa 2249

<210> 76
<211> 344
<212> PRT
<213> Homo sapien

<400> 76

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				20				25						30	
Pro	Thr	Thr	Ala	Lys	Leu	Thr	Ile	Glu	Ser	Thr	Pro	Phe	Asn	Val
				35				40						45	
Ala	Glu	Gly	Lys	Glu	Val	Leu	Leu	Leu	Ala	His	Asn	Leu	Pro	Gln
				50				55						60	
Asn	Arg	Ile	Gly	Tyr	Ser	Trp	Tyr	Lys	Gly	Glu	Arg	Val	Asp	Gly
				65				70						75	
Asn	Ser	Leu	Ile	Val	Gly	Tyr	Val	Ile	Gly	Thr	Gln	Gln	Ala	Thr
				80				85						90	
Pro	Gly	Pro	Ala	Tyr	Ser	Gly	Arg	Glu	Thr	Ile	Tyr	Pro	Asn	Ala
				95				100						105	
Ser	Leu	Leu	Ile	Gln	Asn	Val	Thr	Gln	Asn	Asp	Thr	Gly	Phe	Tyr
				110				115						120	
Thr	Leu	Gln	Val	Ile	Lys	Ser	Asp	Leu	Val	Asn	Glu	Glu	Ala	Thr
				125				130						135	
Gly	Gln	Phe	His	Val	Tyr	Pro	Glu	Leu	Pro	Lys	Pro	Ser	Ile	Ser
				140				145						150	
Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	Asp	Lys	Asp	Ala	Val	Ala	Phe
				155				160						165	
Thr	Cys	Glu	Pro	Glu	Val	Gln	Asn	Thr	Thr	Tyr	Leu	Trp	Trp	Val
				170				175						180	
Asn	Gly	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln	Leu	Ser	Asn
				185				190						195	
Gly	Asn	Met	Thr	Leu	Thr	Leu	Leu	Ser	Val	Lys	Arg	Asn	Asp	Ala
				200				205						210	
Gly	Ser	Tyr	Glu	Cys	Glu	Ile	Gln	Asn	Pro	Ala	Ser	Ala	Asn	Arg
				215				220						225	
Ser	Asp	Pro	Val	Thr	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Val	Pro
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Thr Ile Ser Pro Ser Lys Ala Asn Tyr Arg Pro Gly Glu Asn Leu
245 250 255

Asn Leu Ser Cys His Ala Ala Ser Asn Pro Pro Ala Gln Tyr Ser
260 265 270

Trp Phe Ile Asn Gly Thr Phe Gln Gln Ser Thr Gln Glu Leu Phe
275 280 285

Ile Pro Asn Ile Thr Val Asn Asn Ser Gly Ser Tyr Met Cys Gln
290 295 300

Ala His Asn Ser Ala Thr Gly Leu Asn Arg Thr Thr Val Thr Met
305 310 315

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Val Gly Ile Thr Ile Gly Val Leu Ala Arg Val Ala Leu Ile
335 340

<210> 77
<211> 1386
<212> DNA
<213> Homo sapien

<400> 77
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gaacaagaag aacaaacccc gctgcgtctg cgccccggat tgttccaaca 400

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<210> 78
<211> 317
<212> PRT
<213> Homo sapien

<400> 78

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Leu	Leu	Leu	Cys	Gln	Phe	Met	Glu	Asp	Arg	Ser	Ala	Gln	Ala	Gly	
			20					25						30	
Asn	Cys	Trp	Leu	Arg	Gln	Ala	Lys	Asn	Gly	Arg	Cys	Gln	Val	Leu	
			35					40						45	
Tyr	Lys	Thr	Glu	Leu	Ser	Lys	Glu	Glu	Cys	Cys	Ser	Thr	Gly	Arg	
			50					55						60	
Leu	Ser	Thr	Ser	Trp	Thr	Glu	Glu	Asp	Val	Asn	Asp	Asn	Thr	Leu	
			65					70						75	
Phe	Lys	Trp	Met	Ile	Phe	Asn	Gly	Gly	Ala	Pro	Asn	Cys	Ile	Pro	
			80					85						90	
Cys	Lys	Glu	Thr	Cys	Glu	Asn	Val	Asp	Cys	Gly	Pro	Gly	Lys	Lys	
			95					100						105	
Cys	Arg	Met	Asn	Lys	Lys	Asn	Lys	Pro	Arg	Cys	Val	Cys	Ala	Pro	
			110					115						120	
Asp	Cys	Ser	Asn	Ile	Thr	Trp	Lys	Gly	Pro	Val	Cys	Gly	Leu	Asp	
			125					130						135	
Gly	Lys	Thr	Tyr	Arg	Asn	Glu	Cys	Ala	Leu	Leu	Lys	Ala	Arg	Cys	
			140					145						150	
Lys	Glu	Gln	Pro	Glu	Leu	Glu	Val	Gln	Tyr	Gln	Gly	Arg	Cys	Lys	
			155					160						165	

Lys Thr Cys Arg Asp Val Phe Cys Pro Gly Ser Ser Thr Cys Val
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Val Asp Gln Thr Asn Asn Ala Tyr Cys Val Thr Cys Asn Arg Ile
185 190 195

Cys Pro Glu Pro Ala Ser Ser Glu Gln Tyr Leu Cys Gly Asn Asp
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Gly Val Thr Tyr Ser Ser Ala Cys His Leu Arg Lys Ala Thr Cys
215 220 225

Leu Leu Gly Arg Ser Ile Gly Leu Ala Tyr Glu Gly Lys Cys Ile
230 235 240

Lys Ala Lys Ser Cys Glu Asp Ile Gln Cys Thr Gly Gly Lys Lys
245 250 255

Cys Leu Trp Asp Phe Lys Val Gly Arg Gly Arg Cys Ser Leu Cys
260 265 270

Asp Glu Leu Cys Pro Asp Ser Lys Ser Asp Glu Pro Val Cys Ala
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Ala Cys Ser Ser Gly Val Leu Leu Glu Val Lys His Ser Gly Ser
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Cys Asn

<210> 79
<211> 3445
<212> DNA
<213> Homo sapien

<400> 79
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<210> 80
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<212> PRT
<213> Homo sapien

<400> 80

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                 20                  25                  30

Arg Ile Tyr Ser Tyr Ala Gly Asp Asn Ile Val Thr Ala Gln Ala
                 35                  40                  45

Met Tyr Glu Gly Leu Trp Met Ser Cys Val Ser Gln Ser Thr Gly
                 50                  55                  60

Gln Ile Gln Cys Lys Val Phe Asp Ser Leu Leu Asn Leu Ser Ser
                 65                  70                  75

Thr Leu Gln Ala Thr Arg Ala Leu Met Val Val Gly Ile Leu Leu
                 80                  85                  90

Gly Val Ile Ala Ile Phe Val Ala Thr Val Gly Met Lys Cys Met
                 95                 100                 105

Lys Cys Leu Glu Asp Asp Glu Val Gln Lys Met Arg Met Ala Val
                110                 115                 120

Ile Gly Gly Ala Ile Phe Leu Leu Ala Gly Leu Ala Ile Leu Val
                125                 130                 135

Ala Thr Ala Trp Tyr Gly Asn Arg Ile Val Gln Glu Phe Tyr Asp
                140                 145                 150

Pro Met Thr Pro Val Asn Ala Arg Tyr Glu Phe Gly Gln Ala Leu
                155                 160                 165

Phe Thr Gly Trp Ala Ala Ala Ser Leu Cys Leu Leu Gly Gly Ala
                170                 175                 180

Leu Leu Cys Cys Ser Cys Pro Arg Lys Thr Thr Ser Tyr Pro Thr
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Pro Arg Pro Tyr Pro Lys Pro Ala Pro Ser Ser Gly Lys Asp Tyr
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Val
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<211> 1233
<212> DNA
<213> Homo sapien

<400> 81
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<210> 82
<211> 239
<212> PRT
<213> Homo sapien

<400> 82

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Leu	Gly	Met	Val	Gly	Thr	Leu	Ile	Thr	Thr	Ile	Leu	Pro	His	Trp
				20					25					30	

Arg	Arg	Thr	Ala	His	Val	Gly	Thr	Asn	Ile	Leu	Thr	Ala	Val	Ser
				35					40					45	

Tyr	Leu	Lys	Gly	Leu	Trp	Met	Glu	Cys	Val	Trp	His	Ser	Thr	Gly
				50					55					60	

Ile	Tyr	Gln	Cys	Gln	Ile	Tyr	Arg	Ser	Leu	Leu	Ala	Leu	Pro	Gln
				65					70					75	

Asp Leu Gln Ala Ala Arg Ala Leu Met Val Ile Ser Cys Leu Leu
80 85 90

Ser Gly Ile Ala Cys Ala Cys Ala Val Ile Gly Met Lys Cys Thr
95 100 105

Arg Cys Ala Lys Gly Thr Pro Ala Lys Thr Thr Phe Ala Ile Leu
110 115 120

Gly Gly Thr Leu Phe Ile Leu Ala Gly Leu Leu Cys Met Val Ala
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Val Ser Trp Thr Thr Asn Asp Val Val Gln Asn Phe Tyr Asn Pro
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Leu Cys Leu Ser Cys Gln Asp Glu Ala Pro Tyr Arg Pro Tyr Gln
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Ala Pro Pro Arg Ala Thr Thr Thr Thr Ala Asn Thr Ala Pro Ala
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Cys	Gln	Leu	Glu	Val	Thr	Thr	Glu	Arg	Val	Gln	Arg	Gln	Ser	Val
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Asp Asn Leu Cys Ser Ser Gly Leu Glu Ala Ser Ala Glu Gln Glu
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Val Ser Ala Glu Asp Glu Thr Leu Ala Glu Tyr Met Gly Gln Thr
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Ser Asp His Glu Ser Gln Val Thr Phe Thr His Arg Ile Asn Phe
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Pro Lys Lys Ala Cys Pro Cys Ala Ser Ser Ala Gln Val Leu Gln
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Glu Leu Leu Ser Arg Ile Glu Met Leu Glu Arg Glu Val Ser Val
                 140                 145                 150

Leu Arg Asp Gln Cys Asn Ala Asn Cys Cys Gln Glu Ser Ala Ala
                 155                 160                 165

Thr Gly Gln Leu Asp Tyr Ile Pro His Cys Ser Gly His Gly Asn
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Phe Ser Phe Glu Ser Cys Gly Cys Ile Cys Asn Glu Gly Trp Phe
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Gly Lys Asn Cys Ser Glu Pro Tyr Cys Pro Leu Gly Cys Ser Ser
                 200                 205                 210

Arg Gly Val Cys Val Asp Gly Gln Cys Ile Cys Asp Ser Glu Tyr
                 215                 220                 225

Ser Gly Asp Asp Cys Ser Glu Leu Arg Cys Pro Thr Asp Cys Ser
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Ser Arg Gly Leu Cys Val Asp Gly Glu Cys Val Cys Glu Glu Pro
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Tyr Thr Gly Glu Asp Cys Arg Glu Leu Arg Cys Pro Gly Asp Cys
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Ser Gly Lys Gly Arg Cys Ala Asn Gly Thr Cys Leu Cys Glu Glu
                 275                 280                 285

Gly Tyr Val Gly Glu Asp Cys Gly Gln Arg Gln Cys Leu Asn Ala
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Cys Ser Gly Arg Gly Gln Cys Glu Glu Gly Leu Cys Val Cys Glu
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Glu Gly Tyr Gln Gly Pro Asp Cys Ser Ala Val Ala Pro Pro Glu
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Asp Leu Arg Val Ala Gly Ile Ser Asp Arg Ser Ile Glu Leu Glu
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Trp Asp Gly Pro Met Ala Val Thr Glu Tyr Val Ile Ser Tyr Gln
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Pro Thr Ala Leu Gly Gly Leu Gln Leu Gln Gln Arg Val Pro Gly
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Asp Trp Ser Gly Val Thr Ile Thr Glu Leu Glu Pro Gly Leu Thr
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Tyr Asn Ile Ser Val Tyr Ala Val Ile Ser Asn Ile Leu Ser Leu
                395                 400                 405

Pro Ile Thr Ala Lys Val Ala Thr His Leu Ser Thr Pro Gln Gly
                410                 415                 420

Leu Gln Phe Lys Thr Ile Thr Glu Thr Thr Val Glu Val Gln Trp
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Glu Pro Phe Ser Phe Ser Phe Asp Gly Trp Glu Ile Ser Phe Ile
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Pro Lys Asn Asn Glu Gly Gly Val Ile Ala Gln Val Pro Ser Asp
                455                 460                 465

Val Thr Ser Phe Asn Gln Thr Gly Leu Lys Pro Gly Glu Glu Tyr
                470                 475                 480

Ile Val Asn Val Val Ala Leu Lys Glu Gln Ala Arg Ser Pro Pro
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Thr Ser Ala Ser Val Ser Thr Val Ile Asp Gly Pro Thr Gln Ile
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Leu Val Arg Asp Val Ser Asp Thr Val Ala Phe Val Glu Trp Ile
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Pro Pro Arg Ala Lys Val Asp Phe Ile Leu Leu Lys Tyr Gly Leu
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Val Gly Gly Glu Gly Gly Arg Thr Thr Phe Arg Leu Gln Pro Pro
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Leu Ser Gln Tyr Ser Val Gln Ala Leu Arg Pro Gly Ser Arg Tyr
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Glu Val Ser Val Ser Ala Val Arg Gly Thr Asn Glu Ser Asp Ser
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Ala Thr Thr Gln Phe Thr Thr Glu Ile Asp Ala Pro Lys Asn Leu
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Arg Val Gly Ser Arg Thr Ala Thr Ser Leu Asp Leu Glu Trp Asp
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Asn Ser Glu Ala Glu Val Gln Glu Tyr Lys Val Val Tyr Ser Thr
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Leu Ala Gly Glu Gln Tyr His Glu Val Leu Val Pro Arg Gly Ile
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Gly Pro Thr Thr Arg Ala Thr Leu Thr Asp Leu Val Pro Gly Thr
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Val Pro Ala Thr Met Asn Ala Arg Thr Glu Leu Asp Ser Pro Arg
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Asp Leu Met Val Thr Ala Ser Ser Glu Thr Ser Ile Ser Leu Ile
695 700 705

Trp Thr Lys Ala Ser Gly Pro Ile Asp His Tyr Arg Ile Thr Phe
710 715 720

Thr Pro Ser Ser Gly Ile Ala Ser Glu Val Thr Val Pro Lys Asp
725 730 735

Arg Thr Ser Tyr Thr Leu Thr Asp Leu Glu Pro Gly Ala Glu Tyr
740 745 750

Ile Ile Ser Val Thr Ala Glu Arg Gly Arg Gln Gln Ser Leu Glu
755 760 765

Ser Thr Val Asp Ala Phe Thr Gly Phe Arg Pro Ile Ser His Leu
770 775 780

His Phe Ser His Val Thr Ser Ser Ser Val Asn Ile Thr Trp Ser
785 790 795

Asp Pro Ser Pro Pro Ala Asp Arg Leu Ile Leu Asn Tyr Ser Pro
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Arg Asp Glu Glu Glu Glu Met Met Glu Val Ser Leu Asp Ala Thr
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Lys Arg His Ala Val Leu Met Gly Leu Gln Pro Ala Thr Glu Tyr
830 835 840

Ile Val Asn Leu Val Ala Val His Gly Thr Val Thr Ser Glu Pro
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Ile Val Gly Ser Ile Thr Thr Gly Ile Asp Pro Pro Lys Asp Ile
860 865 870

Thr Ile Ser Asn Val Thr Lys Asp Ser Val Met Val Ser Trp Ser
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Pro Pro Val Ala Ser Phe Asp Tyr Tyr Arg Val Ser Tyr Arg Pro
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Thr Glu Phe Thr Ile Thr Arg Leu Asn Pro Ala Thr Glu Tyr Glu
920 925 930

Ile Ser Leu Asn Ser Val Arg Gly Arg Glu Glu Ser Glu Arg Ile
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Cys Thr Leu Val His Thr Ala Met Asp Asn Pro Val Asp Leu Ile
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Ala Val Ala Gly Glu Thr Ile Leu Val Asp Gly Val Ser Glu Glu
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Phe Arg Leu Val Asp Leu Leu Pro Ser Thr His Tyr Thr Ala Thr
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Met Tyr Ala Thr Asn Gly Pro Leu Thr Ser Gly Thr Ile Ser Thr
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Asn Phe Ser Thr Leu Leu Asp Pro Pro Ala Asn Leu Thr Ala Ser
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Glu Val Thr Arg Gln Ser Ala Leu Ile Ser Trp Gln Pro Pro Arg
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Ala Glu Ile Glu Asn Tyr Val Leu Thr Tyr Lys Ser Thr Asp Gly
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Ser Arg Lys Glu Leu Ile Val Asp Ala Glu Asp Thr Trp Ile Arg
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Leu Glu Gly Leu Leu Glu Asn Thr Asp Tyr Thr Val Leu Leu Gln
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Ala Ala Gln Asp Thr Thr Trp Ser Ser Ile Thr Ser Thr Ala Phe
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Thr Thr Gly Gly Arg Val Phe Pro His Pro Gln Asp Cys Ala Gln
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His Leu Met Asn Gly Asp Thr Leu Ser Gly Val Tyr Pro Ile Phe
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Leu Asn Gly Glu Leu Ser Gln Lys Leu Gln Val Tyr Cys Asp Met
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Gly Gln Thr Asp Phe Phe Arg Lys Trp Ala Asp Tyr Arg Val Gly
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Phe Gly Asn Val Glu Asp Glu Phe Trp Leu Gly Leu Asp Asn Ile
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His Arg Ile Thr Ser Gln Gly Arg Tyr Glu Leu Arg Val Asp Met
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Arg Asp Gly Gln Glu Ala Ala Phe Ala Ser Tyr Asp Arg Phe Ser
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Val Glu Asp Ser Arg Asn Leu Tyr Lys Leu Arg Ile Gly Ser Tyr
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Asn Gly Thr Ala Gly Asp Ser Leu Ser Tyr His Gln Gly Arg Pro
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Ile Asn Trp Tyr His Trp Lys Gly His Glu Phe Ser Ile Pro Phe
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Gln	Glu	Pro	Ala	Leu	Phe	Ser	Thr	Asp	Asn	Asp	Asp	Phe	Thr	Val
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Asn	Pro	Leu	Lys	Ile	Phe	Pro	Ser	Lys	Arg	Ile	Leu	Arg	Arg	His
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Lys Arg Asp Trp Val Val Ala Pro Ile Ser Val Pro Glu Asn Gly
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Lys Gly Pro Phe Pro Gln Arg Leu Asn Gln Leu Lys Ser Asn Lys
                125                 130                 135

Asp Arg Asp Thr Lys Ile Phe Tyr Ser Ile Thr Gly Pro Gly Ala
                140                 145                 150

Asp Ser Pro Pro Glu Gly Val Phe Ala Val Glu Lys Glu Thr Gly
                155                 160                 165

Trp Leu Leu Leu Asn Lys Pro Leu Asp Arg Glu Glu Ile Ala Lys
                170                 175                 180

Tyr Glu Leu Phe Gly His Ala Val Ser Glu Asn Gly Ala Ser Val
                185                 190                 195

Glu Asp Pro Met Asn Ile Ser Ile Ile Val Thr Asp Gln Asn Asp
                200                 205                 210

His Lys Pro Lys Phe Thr Gln Asp Thr Phe Arg Gly Ser Val Leu
                215                 220                 225

Glu Gly Val Leu Pro Gly Thr Ser Val Met Gln Val Thr Ala Thr
                230                 235                 240

Asp Glu Asp Asp Ala Ile Tyr Thr Tyr Asn Gly Val Val Ala Tyr
                245                 250                 255

Ser Ile His Ser Gln Glu Pro Lys Asp Pro His Asp Leu Met Phe
                260                 265                 270

Thr Ile His Arg Ser Thr Gly Thr Ile Ser Val Ile Ser Ser Gly
                275                 280                 285

Leu Asp Arg Glu Lys Val Pro Glu Tyr Thr Leu Thr Ile Gln Ala
                290                 295                 300

Thr Asp Met Asp Gly Asp Gly Ser Thr Thr Thr Ala Val Ala Val
                305                 310                 315

Val Glu Ile Leu Asp Ala Asn Asp Asn Ala Pro Met Phe Asp Pro
                320                 325                 330

Gln Lys Tyr Glu Ala His Val Pro Glu Asn Ala Val Gly His Glu
                335                 340                 345

Val Gln Arg Leu Thr Val Thr Asp Leu Asp Ala Pro Asn Ser Pro
                350                 355                 360

Ala Trp Arg Ala Thr Tyr Leu Ile Met Gly Gly Asp Asp Gly Asp
                365                 370                 375

His Phe Thr Ile Thr Thr His Pro Glu Ser Asn Gln Gly Ile Leu
                380                 385                 390

Thr Thr Arg Lys Gly Leu Asp Phe Glu Ala Lys Asn Gln His Thr
                395                 400                 405

Leu Tyr Val Glu Val Thr Asn Glu Ala Pro Phe Val Leu Lys Leu
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410 415 420

Pro Thr Ser Thr Ala Thr Ile Val Val His Val Glu Asp Val Asn
425 430 435

Glu Ala Pro Val Phe Val Pro Pro Ser Lys Val Val Glu Val Gln
440 445 450

Glu Gly Ile Pro Thr Gly Glu Pro Val Cys Val Tyr Thr Ala Glu
455 460 465

Asp Pro Asp Lys Glu Asn Gln Lys Ile Ser Tyr Arg Ile Leu Arg
470 475 480

Asp Pro Ala Gly Trp Leu Ala Met Asp Pro Asp Ser Gly Gln Val
485 490 495

Thr Ala Val Gly Thr Leu Asp Arg Glu Asp Glu Gln Phe Val Arg
500 505 510

Asn Asn Ile Tyr Glu Val Met Val Leu Ala Met Asp Asn Gly Ser
515 520 525

Pro Pro Thr Thr Gly Thr Gly Thr Leu Leu Leu Thr Leu Ile Asp
530 535 540

Val Asn Asp His Gly Pro Val Pro Glu Pro Arg Gln Ile Thr Ile
545 550 555

Cys Asn Gln Ser Pro Val Arg Gln Val Leu Asn Ile Thr Asp Lys
560 565 570

Asp Leu Ser Pro His Thr Ser Pro Phe Gln Ala Gln Leu Thr Asp
575 580 585

Asp Ser Asp Ile Tyr Trp Thr Ala Glu Val Asn Glu Glu Gly Asp
590 595 600

Thr Val Val Leu Ser Leu Lys Lys Phe Leu Lys Gln Asp Thr Tyr
605 610 615

Asp Val His Leu Ser Leu Ser Asp His Gly Asn Lys Glu Gln Leu
620 625 630

Thr Val Ile Arg Ala Thr Val Cys Asp Cys His Gly His Val Glu
635 640 645

Thr Cys Pro Gly Pro Trp Lys Gly Gly Phe Ile Leu Pro Val Leu
650 655 660

Gly Ala Val Leu Ala Leu Leu Phe Leu Leu Leu Val Leu Leu Leu
665 670 675

Leu Val Arg Lys Lys Arg Lys Ile Lys Glu Pro Leu Leu Leu Pro
680 685 690

Glu Asp Asp Thr Arg Asp Asn Val Phe Tyr Tyr Gly Glu Glu Gly
695 700 705

Gly Gly Glu Glu Asp Gln Asp Tyr Asp Ile Thr Gln Leu His Arg
710 715 720

Gly Leu Glu Ala Arg Pro Glu Val Val Leu Arg Asn Asp Val Ala
725 730 735

Pro Thr Ile Ile Pro Thr Pro Met Tyr Arg Pro Arg Pro Ala Asn
740 745 750

Pro Asp Glu Ile Gly Asn Phe Ile Ile Glu Asn Leu Lys Ala Ala
755 760 765

Asn Thr Asp Pro Thr Ala Pro Pro Tyr Asp Thr Leu Leu Val Phe
770 775 780

Asp Tyr Glu Gly Ser Gly Ser Asp Ala Ala Ser Leu Ser Ser Leu
785 790 795

Thr Ser Ser Ala Ser Asp Gln Asp Gln Asp Tyr Asp Tyr Leu Asn
800 805 810

Glu Trp Gly Ser Arg Phe Lys Lys Leu Ala Asp Met Tyr Gly Gly
815 820 825

Gly Glu Asp Asp

<210> 87
<211> 3427
<212> DNA
<213> Homo sapien

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tatctattac tacctgttta gcagagttta catggtatag aagatatggt 200

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gccaatcaat accatttatc cagaggaatc actggaagga aaagtctcac 300

tcaactgtag ggcacgagcc agccctttcc cggtttacaa atggagaatg 350

aataatgggg acgttgatct cacaagtgat cgatacagta tggtaggagg 400

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tatgccttat aaaccactta acctgat 3427

<210> 88
<211> 1018
<212> PRT
<213> Homo sapien

<400> 88

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Thr	Thr	Cys	Leu	Ala	Glu	Phe	Thr	Trp	Tyr	Arg	Arg	Tyr	Gly	His	
				20				25						30	
Gly	Val	Ser	Glu	Glu	Asp	Lys	Gly	Phe	Gly	Pro	Ile	Phe	Glu	Glu	
				35				40						45	

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Gln Pro Ile Asn Thr Ile Tyr Pro Glu Glu Ser Leu Glu Gly Lys
                50                  55                  60

Val Ser Leu Asn Cys Arg Ala Arg Ala Ser Pro Phe Pro Val Tyr
                65                  70                  75

Lys Trp Arg Met Asn Asn Gly Asp Val Asp Leu Thr Ser Asp Arg
                80                  85                  90

Tyr Ser Met Val Gly Gly Asn Leu Val Ile Asn Asn Pro Asp Lys
                95                 100                 105

Gln Lys Asp Ala Gly Ile Tyr Tyr Cys Leu Ala Ser Asn Asn Tyr
               110                 115                 120

Gly Met Val Arg Ser Thr Glu Ala Thr Leu Ser Phe Gly Tyr Leu
               125                 130                 135

Asp Pro Phe Pro Pro Glu Glu Arg Pro Glu Val Arg Val Lys Glu
               140                 145                 150

Gly Lys Gly Met Val Leu Leu Cys Asp Pro Pro Tyr His Phe Pro
               155                 160                 165

Asp Asp Leu Ser Tyr Arg Trp Leu Leu Asn Glu Phe Pro Val Phe
               170                 175                 180

Ile Thr Met Asp Lys Arg Arg Phe Val Ser Gln Thr Asn Gly Asn
               185                 190                 195

Leu Tyr Ile Ala Asn Val Glu Ala Ser Asp Lys Gly Asn Tyr Ser
               200                 205                 210

Cys Phe Val Ser Ser Pro Ser Ile Thr Lys Ser Val Phe Ser Lys
               215                 220                 225

Phe Ile Pro Leu Ile Pro Ile Pro Glu Arg Thr Thr Lys Pro Tyr
               230                 235                 240

Pro Ala Asp Ile Val Val Gln Phe Lys Asp Val Tyr Ala Leu Met
               245                 250                 255

Gly Gln Asn Val Thr Leu Glu Cys Phe Ala Leu Gly Asn Pro Val
               260                 265                 270

Pro Asp Ile Arg Trp Arg Lys Val Leu Glu Pro Met Pro Ser Thr
               275                 280                 285

Ala Glu Ile Ser Thr Ser Gly Ala Val Leu Lys Ile Phe Asn Ile
               290                 295                 300

Gln Leu Glu Asp Glu Gly Ile Tyr Glu Cys Glu Ala Glu Asn Ile
               305                 310                 315

Arg Gly Lys Asp Lys His Gln Ala Arg Ile Tyr Val Gln Ala Phe
               320                 325                 330

Pro Glu Trp Val Glu His Ile Asn Asp Thr Glu Val Asp Ile Gly
               335                 340                 345
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Ser Asp Leu Tyr Trp Pro Cys Val Ala Thr Gly Lys Pro Ile Pro
350 355 360

Thr Ile Arg Trp Leu Lys Asn Gly Tyr Ala Tyr His Lys Gly Glu
365 370 375

Leu Arg Leu Tyr Asp Val Thr Phe Glu Asn Ala Gly Met Tyr Gln
380 385 390

Cys Ile Ala Glu Asn Thr Tyr Gly Ala Ile Tyr Ala Asn Ala Glu
395 400 405

Leu Lys Ile Leu Ala Leu Ala Pro Thr Phe Glu Met Asn Pro Met
410 415 420

Lys Lys Lys Ile Leu Ala Ala Lys Gly Gly Arg Val Ile Ile Glu
425 430 435

Cys Lys Pro Lys Ala Ala Pro Lys Pro Lys Phe Ser Trp Ser Lys
440 445 450

Gly Thr Glu Trp Leu Val Asn Ser Ser Arg Ile Leu Ile Trp Glu
455 460 465

Asp Gly Ser Leu Glu Ile Asn Asn Ile Thr Arg Asn Asp Gly Gly
470 475 480

Ile Tyr Thr Cys Phe Ala Glu Asn Asn Arg Gly Lys Ala Asn Ser
485 490 495

Thr Gly Thr Leu Val Ile Thr Asp Pro Thr Arg Ile Ile Leu Ala
500 505 510

Pro Ile Asn Ala Asp Ile Thr Val Gly Glu Asn Ala Thr Met Gln
515 520 525

Cys Ala Ala Ser Phe Asp Pro Ala Leu Asp Leu Thr Phe Val Trp
530 535 540

Ser Phe Asn Gly Tyr Val Ile Asp Phe Asn Lys Glu Asn Ile His
545 550 555

Tyr Gln Arg Asn Phe Met Leu Asp Ser Asn Gly Glu Leu Leu Ile
560 565 570

Arg Asn Ala Gln Leu Lys His Ala Gly Arg Tyr Thr Cys Thr Ala
575 580 585

Gln Thr Ile Val Asp Asn Ser Ser Ala Ser Ala Asp Leu Val Val
590 595 600

Arg Gly Pro Pro Gly Pro Pro Gly Gly Leu Arg Ile Glu Asp Ile
605 610 615

Arg Ala Thr Ser Val Ala Leu Thr Trp Ser Arg Gly Ser Asp Asn
620 625 630

His Ser Pro Ile Ser Lys Tyr Thr Ile Gln Thr Lys Thr Ile Leu
635 640 645

Ser Asp Asp Trp Lys Asp Ala Lys Thr Asp Pro Pro Ile Ile Glu

650 655 660

Gly Asn Met Glu Ala Ala Arg Ala Val Asp Leu Ile Pro Trp Met
665 670 675

Glu Tyr Glu Phe Arg Val Val Ala Thr Asn Thr Leu Gly Arg Gly
680 685 690

Glu Pro Ser Ile Pro Ser Asn Arg Ile Lys Thr Asp Gly Ala Ala
695 700 705

Pro Asn Val Ala Pro Ser Asp Val Gly Gly Gly Gly Gly Arg Asn
710 715 720

Arg Glu Leu Thr Ile Thr Trp Ala Pro Leu Ser Arg Glu Tyr His
725 730 735

Tyr Gly Asn Asn Phe Gly Tyr Ile Val Ala Phe Lys Pro Phe Asp
740 745 750

Gly Glu Glu Trp Lys Lys Val Thr Val Thr Asn Pro Asp Thr Gly
755 760 765

Arg Tyr Val His Lys Asp Glu Thr Met Ser Pro Ser Thr Ala Phe
770 775 780

Gln Val Lys Val Lys Ala Phe Asn Asn Lys Gly Asp Gly Pro Tyr
785 790 795

Ser Leu Val Ala Val Ile Asn Ser Ala Gln Asp Ala Pro Ser Glu
800 805 810

Ala Pro Thr Glu Val Gly Val Lys Val Leu Ser Ser Ser Glu Ile
815 820 825

Ser Val His Trp Glu His Val Leu Glu Lys Ile Val Glu Ser Tyr
830 835 840

Gln Ile Arg Tyr Trp Ala Ala His Asp Lys Glu Glu Ala Ala Asn
845 850 855

Arg Val Gln Val Thr Ser Gln Glu Tyr Ser Ala Arg Leu Glu Asn
860 865 870

Leu Leu Pro Asp Thr Gln Tyr Phe Ile Glu Val Gly Ala Cys Asn
875 880 885

Ser Ala Gly Cys Gly Pro Pro Ser Asp Met Ile Glu Ala Phe Thr
890 895 900

Lys Lys Ala Pro Pro Ser Gln Pro Pro Arg Ile Ile Ser Ser Val
905 910 915

Arg Ser Gly Ser Arg Tyr Ile Ile Thr Trp Asp His Val Val Ala
920 925 930

Leu Ser Asn Glu Ser Thr Val Thr Gly Tyr Lys Val Leu Tyr Arg
935 940 945

Pro Asp Gly Gln His Asp Gly Lys Leu Tyr Ser Thr His Lys His
950 955 960

Ser Ile Glu Val Pro Ile Pro Arg Asp Gly Glu Tyr Val Val Glu
965 970 975

Val Arg Ala His Ser Asp Gly Gly Asp Gly Val Val Ser Gln Val
980 985 990

Lys Ile Ser Gly Ala Pro Thr Leu Ser Pro Ser Leu Leu Gly Leu
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Leu Leu Pro Ala Phe Gly Ile Leu Val Tyr Leu Glu Phe
1010 1015

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<211> 1616
<212> DNA
<213> Homo sapien

<400> 89
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aaaaaaaaaa aaaaaa 1616

<210> 90
<211> 300
<212> PRT
<213> Homo sapien

<400> 90

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Ala	Ile	Pro	Val	Lys	Gln	Ala	Asp	Ser	Gly	Ser	Ser	Glu	Glu	Lys
			20					25						30
Gln	Leu	Tyr	Asn	Lys	Tyr	Pro	Asp	Ala	Val	Ala	Thr	Trp	Leu	Asn
			35					40						45
Pro	Asp	Pro	Ser	Gln	Lys	Gln	Asn	Leu	Leu	Ala	Pro	Gln	Thr	Leu
			50					55						60
Pro	Ser	Lys	Ser	Asn	Glu	Ser	His	Asp	His	Met	Asp	Asp	Met	Asp
			65					70						75
Asp	Glu	Asp	Asp	Asp	Asp	His	Val	Asp	Ser	Gln	Asp	Ser	Ile	Asp
			80					85						90
Ser	Asn	Asp	Ser	Asp	Asp	Val	Asp	Asp	Thr	Asp	Asp	Ser	His	Gln
			95					100						105
Ser	Asp	Glu	Ser	His	His	Ser	Asp	Glu	Ser	Asp	Glu	Leu	Val	Thr
			110					115						120
Asp	Phe	Pro	Thr	Asp	Leu	Pro	Ala	Thr	Glu	Val	Phe	Thr	Pro	Val
			125					130						135
Val	Pro	Thr	Val	Asp	Thr	Tyr	Asp	Gly	Arg	Gly	Asp	Ser	Val	Val
			140					145						150
Tyr	Gly	Leu	Arg	Ser	Lys	Ser	Lys	Lys	Phe	Arg	Arg	Pro	Asp	Ile

155 160 165

Gln Tyr Pro Asp Ala Thr Asp Glu Asp Ile Thr Ser His Met Glu
170 175 180

Ser Glu Glu Leu Asn Gly Ala Tyr Lys Ala Ile Pro Val Ala Gln
185 190 195

Asp Leu Asn Ala Pro Ser Asp Trp Asp Ser Arg Gly Lys Asp Ser
200 205 210

Tyr Glu Thr Ser Gln Leu Asp Asp Gln Ser Ala Glu Thr His Ser
215 220 225

His Lys Gln Ser Arg Leu Tyr Lys Arg Lys Ala Asn Asp Glu Ser
230 235 240

Asn Glu His Ser Asp Val Ile Asp Ser Gln Glu Leu Ser Lys Val
245 250 255

Ser Arg Glu Phe His Ser His Glu Phe His Ser His Glu Asp Met
260 265 270

Leu Val Val Asp Pro Lys Ser Lys Glu Glu Asp Lys His Leu Lys
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290 295 300

<210> 91
<211> 2593
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gctgcattgt ttgcaatact ttgataaatg aaaaatgggg acgggaagag 650

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acctactata atacagtagc taacatgtat tgagcacaga tttttttgg 1800

taaaactgtg aggagctagg atatatactt ggtgaaacaa accagtatgt 1850

tccctgttct cttgagcttc gactcttctg tgctctattg ctgcgcactg 1900

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ccttccccag tgatcactgt cataaccagt gctctaccgt atcccatcac 2050

tgaggactga tgttgactga catcatttta tcgtaataaa catgtggctc 2100

tattagctgc aagctttacc aagtaattgg catgacatct gagcacagaa 2150

attaaggcaa aaaaccaaag caaaacaaat acatggtgct gaaattaact 2200

tgatgccaag cccaaggcag ctgatttctg tgtatttgaa cttagggcaa 2250

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ggacccacaa agcaggcaga ggtaatgcag aaatctgttt tgttcccatg 2450

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tgtatcagca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 2593

<210> 92
<211> 359
<212> PRT
<213> Homo sapien

<400> 92

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				20				25						30	
Leu	Ile	Val	Ile	Cys	Gly	His	Val	Pro	Ser	Asp	Ala	Asp	Arg	Phe	
				35				40						45	
Gln	Val	Asp	Leu	Gln	Asn	Gly	Ser	Ser	Val	Lys	Pro	Arg	Ala	Asp	
				50				55						60	
Val	Ala	Phe	His	Phe	Asn	Pro	Arg	Phe	Lys	Arg	Ala	Gly	Cys	Ile	
				65				70						75	
Val	Cys	Asn	Thr	Leu	Ile	Asn	Glu	Lys	Trp	Gly	Arg	Glu	Glu	Ile	
				80				85						90	
Thr	Tyr	Asp	Thr	Pro	Phe	Lys	Arg	Glu	Lys	Ser	Phe	Glu	Ile	Val	
				95				100						105	
Ile	Met	Val	Leu	Lys	Asp	Lys	Phe	Gln	Val	Ala	Val	Asn	Gly	Lys	
				110				115						120	
His	Thr	Leu	Leu	Tyr	Gly	His	Arg	Ile	Gly	Pro	Glu	Lys	Ile	Asp	
				125				130						135	
Thr	Leu	Gly	Ile	Tyr	Gly	Lys	Val	Asn	Ile	His	Ser	Ile	Gly	Phe	
				140				145						150	
Ser	Phe	Ser	Ser	Asp	Leu	Gln	Ser	Thr	Gln	Ala	Ser	Ser	Leu	Glu	
				155				160						165	
Leu	Thr	Glu	Ile	Ser	Arg	Glu	Asn	Val	Pro	Lys	Ser	Gly	Thr	Pro	
				170				175						180	
Gln	Leu	Gln	Thr	Val	Ser	Pro	Ser	Trp	Asp	Leu	Gln	Gly	His	Gly	
				185				190						195	

Ser Glu Thr Phe Cys Ser Val Leu Trp Thr Arg Val Phe Leu Glu
200 205 210

Ile Ala Phe Cys Arg Pro Ile Gly Leu Thr Val Ala Ser Phe Gln
215 220 225

Ser Leu Pro Phe Ala Ala Arg Leu Asn Thr Pro Met Gly Pro Gly
230 235 240

Arg Thr Val Val Val Lys Gly Glu Val Asn Ala Asn Ala Lys Ser
245 250 255

Phe Asn Val Asp Leu Leu Ala Gly Lys Ser Lys Asp Ile Ala Leu
260 265 270

His Leu Asn Pro Arg Leu Asn Ile Lys Ala Phe Val Arg Asn Ser
275 280 285

Phe Leu Gln Glu Ser Trp Gly Glu Glu Glu Arg Asn Ile Thr Ser
290 295 300

Phe Pro Phe Ser Pro Gly Met Tyr Phe Glu Met Ile Ile Tyr Cys
305 310 315

Asp Val Arg Glu Phe Lys Val Ala Val Asn Gly Val His Ser Leu
320 325 330

Glu Tyr Lys His Arg Phe Lys Glu Leu Ser Ser Ile Asp Thr Leu
335 340 345

Glu Ile Asn Gly Asp Ile His Leu Leu Glu Val Arg Ser Trp
350 355

<210> 93
<211> 2401
<212> DNA
<213> Homo sapien

<400> 93
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gacggcccac caccccagcc cgccaactag tcagcctgcg cctggcgcct 150

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tgctggccct gagccaggcc ctgccctttg agcagagagg cttctgggac 250

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cgctgacacc tcgggcgtcc tggacccgga ctctgtcaca cccacctaca 350

gcgccatgtg tcctttcggc tgccactgcc acctgcgggt ggttcagtgc 400

tccgacctgg gtctgaagtc tgtgcccaaa gagatctccc ctgacaccac 450

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a 2401

<210> 94
<211> 368
<212> PRT
<213> Homo sapien

<400> 94

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				20				25						30	
Asp	Gly	Pro	Phe	Met	Met	Asn	Asp	Glu	Glu	Ala	Ser	Gly	Ala	Asp	
				35				40						45	
Thr	Ser	Gly	Val	Leu	Asp	Pro	Asp	Ser	Val	Thr	Pro	Thr	Tyr	Ser	
				50				55						60	
Ala	Met	Cys	Pro	Phe	Gly	Cys	His	Cys	His	Leu	Arg	Val	Val	Gln	
				65				70						75	
Cys	Ser	Asp	Leu	Gly	Leu	Lys	Ser	Val	Pro	Lys	Glu	Ile	Ser	Pro	
				80				85						90	
Asp	Thr	Thr	Leu	Leu	Asp	Leu	Gln	Asn	Asn	Asp	Ile	Ser	Glu	Leu	
				95				100						105	
Arg	Lys	Asp	Asp	Phe	Lys	Gly	Leu	Gln	His	Leu	Tyr	Ala	Leu	Val	
				110				115						120	
Leu	Val	Asn	Asn	Lys	Ile	Ser	Lys	Ile	His	Glu	Lys	Ala	Phe	Ser	
				125				130						135	
Pro	Leu	Arg	Lys	Leu	Gln	Lys	Leu	Tyr	Ile	Ser	Lys	Asn	His	Leu	
				140				145						150	
Val	Glu	Ile	Pro	Pro	Asn	Leu	Pro	Ser	Ser	Leu	Val	Glu	Leu	Arg	
				155				160						165	
Ile	His	Asp	Asn	Arg	Ile	Arg	Lys	Val	Pro	Lys	Gly	Val	Phe	Ser	
				170				175						180	
Gly	Leu	Arg	Asn	Met	Asn	Cys	Ile	Glu	Met	Gly	Gly	Asn	Pro	Leu	
				185				190						195	

Glu Asn Ser Gly Phe Glu Pro Gly Ala Phe Asp Gly Leu Lys Leu
200 205 210

Asn Tyr Leu Arg Ile Ser Glu Ala Lys Leu Thr Gly Ile Pro Lys
215 220 225

Asp Leu Pro Glu Thr Leu Asn Glu Leu His Leu Asp His Asn Lys
230 235 240

Ile Gln Ala Ile Glu Leu Glu Asp Leu Leu Arg Tyr Ser Lys Leu
245 250 255

Tyr Arg Leu Gly Leu Gly His Asn Gln Ile Arg Met Ile Glu Asn
260 265 270

Gly Ser Leu Ser Phe Leu Pro Thr Leu Arg Glu Leu His Leu Asp
275 280 285

Asn Asn Lys Leu Ala Arg Val Pro Ser Gly Leu Pro Asp Leu Lys
290 295 300

Leu Leu Gln Val Val Tyr Leu His Ser Asn Asn Ile Thr Lys Val
305 310 315

Gly Val Asn Asp Phe Cys Pro Met Gly Phe Gly Val Lys Arg Ala
320 325 330

Tyr Tyr Asn Gly Ile Ser Leu Phe Asn Asn Pro Val Pro Tyr Trp
335 340 345

Glu Val Gln Pro Ala Thr Phe Arg Cys Val Thr Asp Arg Leu Ala
350 355 360

Ile Gln Phe Gly Asn Tyr Lys Lys
365

<210> 95
<211> 1983
<212> DNA
<213> Homo sapien

<400> 95
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<210> 96
<211> 565
<212> PRT
<213> Homo sapien

<400> 96
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Ile Ser Ile Pro Asp His Gly Phe Cys Gln Pro Ile Ser Ile Pro
35 40 45

Leu Cys Thr Asp Ile Ala Tyr Asn Gln Thr Ile Met Pro Asn Leu
50 55 60

Leu Gly His Thr Asn Gln Glu Asp Ala Gly Leu Glu Val His Gln
65 70 75

Phe Tyr Pro Leu Val Lys Val Gln Cys Ser Pro Glu Leu Arg Phe
80 85 90

Phe Leu Cys Ser Met Tyr Ala Pro Val Cys Thr Val Leu Glu Gln
95 100 105

Ala Ile Pro Pro Cys Arg Ser Ile Cys Glu Arg Ala Arg Gln Gly
110 115 120

Cys Glu Ala Leu Met Asn Lys Phe Gly Phe Gln Trp Pro Glu Arg
125 130 135

Leu Arg Cys Glu His Phe Pro Arg His Gly Ala Glu Gln Ile Cys
140 145 150

Val Gly Gln Asn His Ser Glu Asp Gly Ala Pro Ala Leu Leu Thr
155 160 165

Thr Ala Pro Pro Pro Gly Leu Gln Pro Gly Ala Gly Gly Thr Pro
170 175 180

Gly Gly Pro Gly Gly Gly Gly Ala Pro Pro Arg Tyr Ala Thr Leu
185 190 195

Glu His Pro Phe His Cys Pro Arg Val Leu Lys Val Pro Ser Tyr
200 205 210

Leu Ser Tyr Lys Phe Leu Gly Glu Arg Asp Cys Ala Ala Pro Cys
215 220 225

Glu Pro Ala Arg Pro Asp Gly Ser Met Phe Phe Ser Gln Glu Glu
230 235 240

Thr Arg Phe Ala Arg Leu Trp Ile Leu Thr Trp Ser Val Leu Cys
245 250 255

Cys Ala Ser Thr Phe Phe Thr Val Thr Thr Tyr Leu Val Asp Met
260 265 270

Gln Arg Phe Arg Tyr Pro Glu Arg Pro Ile Ile Phe Leu Ser Gly

275 280 285

Cys Tyr Thr Met Val Ser Val Ala Tyr Ile Ala Gly Phe Val Leu
290 295 300

Gln Glu Arg Val Val Cys Asn Glu Arg Phe Ser Glu Asp Gly Tyr
305 310 315

Arg Thr Val Val Gln Gly Thr Lys Lys Glu Gly Cys Thr Ile Leu
320 325 330

Phe Met Met Leu Tyr Phe Phe Ser Met Ala Ser Ser Ile Trp Trp
335 340 345

Val Ile Leu Ser Leu Thr Trp Phe Leu Ala Ala Gly Met Lys Trp
350 355 360

Gly His Glu Ala Ile Glu Ala Asn Ser Gln Tyr Phe His Leu Ala
365 370 375

Ala Trp Ala Val Pro Ala Val Lys Thr Ile Thr Ile Leu Ala Met
380 385 390

Gly Gln Ile Asp Gly Asp Leu Leu Ser Gly Val Cys Phe Val Gly
395 400 405

Leu Asn Ser Leu Asp Pro Leu Arg Gly Phe Val Leu Ala Pro Leu
410 415 420

Phe Val Tyr Leu Phe Ile Gly Thr Ser Phe Leu Leu Ala Gly Phe
425 430 435

Val Ser Leu Phe Arg Ile Arg Thr Ile Met Lys His Asp Gly Thr
440 445 450

Lys Thr Glu Lys Leu Glu Arg Leu Met Val Arg Ile Gly Val Phe
455 460 465

Ser Val Leu Tyr Thr Val Pro Ala Thr Ile Val Ile Ala Cys Tyr
470 475 480

Phe Tyr Glu Gln Ala Phe Arg Glu His Trp Glu Arg Ser Trp Val
485 490 495

Ser Gln His Cys Lys Ser Leu Ala Ile Pro Cys Pro Ala His Tyr
500 505 510

Thr Pro Arg Met Ser Pro Asp Phe Thr Val Tyr Met Ile Lys Tyr
515 520 525

Leu Met Thr Leu Ile Val Gly Ile Thr Ser Gly Phe Trp Ile Trp
530 535 540

Ser Gly Lys Thr Leu His Ser Trp Arg Lys Phe Tyr Thr Arg Leu
545 550 555

Thr Asn Ser Arg His Gly Glu Thr Thr Val
560 565

<210> 97
<211> 2294

<212> DNA
<213> Homo sapien

<400> 97
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<210> 98
<211> 428
<212> PRT
<213> Homo sapien

<400> 98

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				20				25						30	
Phe	Gln	Ile	Ala	Asp	Cys	Ala	Tyr	Arg	Asp	Leu	Glu	Ser	Val	Pro	
				35				40						45	
Pro	Gly	Phe	Pro	Ala	Asn	Val	Thr	Thr	Leu	Ser	Leu	Ser	Ala	Asn	
				50				55						60	
Arg	Leu	Pro	Gly	Leu	Pro	Glu	Gly	Ala	Phe	Arg	Glu	Val	Pro	Leu	
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Leu	Gln	Ser	Leu	Trp	Leu	Ala	His	Asn	Glu	Ile	Arg	Thr	Val	Ala	
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Ala	Gly	Ala	Leu	Ala	Ser	Leu	Ser	His	Leu	Lys	Ser	Leu	Asp	Leu	
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Phe Ile Pro Arg Asp Ala Phe Arg Ser Leu Arg Ala Leu Arg Ser
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Leu Gln Leu Asn His Asn Arg Leu His Thr Leu Ala Glu Gly Thr
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Phe Thr Pro Leu Thr Ala Leu Ser His Leu Gln Ile Asn Glu Asn
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Pro Phe Asp Cys Thr Cys Gly Ile Val Trp Leu Lys Thr Trp Ala
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Leu Thr Thr Ala Val Ser Ile Pro Glu Gln Asp Asn Ile Ala Cys
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Thr Ser Pro His Val Leu Lys Gly Thr Pro Leu Ser Arg Leu Pro
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Pro Leu Pro Cys Ser Ala Pro Ser Val Gln Leu Ser Tyr Gln Pro
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Ser Gln Asp Gly Ala Glu Leu Arg Pro Gly Phe Val Leu Ala Leu
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His Cys Asp Val Asp Gly Gln Pro Ala Pro Gln Leu His Trp His
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Ile Gln Ile Pro Ser Gly Ile Val Glu Ile Thr Ser Pro Asn Val
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Gly Thr Asp Gly Arg Ala Leu Pro Gly Thr Pro Val Ala Ser Ser
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Asp Phe Gly Lys Leu Glu Glu Gly Thr Tyr Ser Cys Leu Ala Thr
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Asn Glu Leu Gly Ser Ala Glu Ser Ser Val Asp Val Ala Leu Ala
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Thr Pro Gly Glu Gly Gly Glu Asp Thr Leu Gly Arg Arg Phe His
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Gly Lys Ala Val Glu Gly Lys Gly Cys Tyr Thr Val Asp Asn Glu
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Val Gln Pro Ser Gly Pro Glu Asp Asn Val Val Ile Ile Tyr Leu
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Ser Arg Ala Gly Asn Pro Glu Ala Ala Val Ala Glu Gly Val Pro
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Asn	Gly	Asp	Ala	Ala	Gln	Gln	Val	Ile	Leu	Val	Gln	Val	Asn	Pro	
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Ile Pro Pro Ile His Val Pro Pro Gly Tyr Ile Ser Gln Val Ile
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Glu Asp Ser Thr Gly Val Arg Arg Val Val Val Thr Pro Gln Ser
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Pro Glu Cys Tyr Pro Pro Ser Tyr Pro Ser Ala Met Ser Pro Thr
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His His Leu Pro Pro Tyr Leu Thr His His Pro His Phe Ile His
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Asn Ser His Thr Ala Tyr Tyr Pro Pro Val Thr Gly Pro Gly Asp
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Met Pro Pro Gln Phe Phe Pro Gln His His Leu Pro His Thr Ile
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Tyr Gly Glu Gln Glu Ile Ile Pro Phe Tyr Gly Met Ser Ser Tyr
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Ile Thr Arg Glu Asp Gln Tyr Ser Lys Pro Pro His Lys Lys Leu
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Lys Asp Arg Gln Ile Asp Arg Gln Asn Arg Leu Asn Arg Pro Pro
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Lys Ser Asn Asp Ser Asp Leu Gln Glu Tyr Glu Leu Glu Val Lys
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Gly Ser Lys Ile Thr Asn Tyr Leu Leu Glu Trp Asp Glu Gly Lys
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Arg Asn Ser Gly Phe Arg Gln Cys Phe Phe Gly Ser Gln Lys His
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Cys Lys Leu Thr Lys Leu Cys Pro Ala Met Gly Tyr Thr Phe Arg
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Leu Ala Ala Arg Asn Asp Ile Gly Thr Ser Gly Tyr Ser Gln Glu
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Val Val Cys Tyr Thr Leu Gly Asn Ile Pro Gln Met Pro Ser Ala
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Pro Arg Leu Val Arg Ala Gly Ile Thr Trp Val Thr Leu Gln Trp
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Ser Lys Pro Glu Gly Cys Ser Pro Glu Glu Val Ile Thr Tyr Thr
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Leu Glu Ile Gln Glu Asp Glu Asn Asp Asn Leu Phe His Pro Lys
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Tyr Thr Gly Glu Asp Leu Thr Cys Thr Val Lys Asn Leu Lys Arg
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Ser Thr Gln Tyr Thr Phe Arg Leu Thr Ala Ser Asn Thr Glu Gly
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Arg Pro Gly Pro Pro Thr Arg Pro Leu Val Lys Gly Pro Val Thr
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Ser His Gly Phe Ser Val Lys Trp Asp Pro Pro Lys Asp Asn Gly
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Gly Ser Glu Ile Leu Lys Tyr Leu Leu Glu Ile Thr Asp Gly Asn
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Glu Tyr Thr Phe Thr His Leu Lys Pro Gly Thr Leu Tyr Lys Leu
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Ser Leu Pro Val Arg Thr Leu Ser Ile Ala Pro Gly Gln Cys Arg

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Pro Pro Arg Val Leu Gly Arg Pro Lys His Lys Glu Val His Leu
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agcgctcgtg accaaggata caccaaagcc cttaagacct caggggggcgg 2500

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aaaaaaaaaa aaaaa 2565

<210> 102
<211> 757
<212> PRT
<213> Homo sapien

<400> 102

Met	Leu	Leu	Arg	Leu	Leu	Leu	Ala	Trp	Ala	Ala	Ala	Gly	Pro	Thr
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Leu	Gly	Gln	Asp	Pro	Trp	Ala	Ala	Glu	Pro	Arg	Ala	Ala	Cys	Gly
				20				25						30	
Pro	Ser	Ser	Cys	Tyr	Ala	Leu	Phe	Pro	Arg	Arg	Arg	Thr	Phe	Leu
				35				40						45	
Glu	Ala	Trp	Arg	Ala	Cys	Arg	Glu	Leu	Gly	Gly	Asp	Leu	Ala	Thr
				50				55						60	
Pro	Arg	Thr	Pro	Glu	Glu	Ala	Gln	Arg	Val	Asp	Ser	Leu	Val	Gly
				65				70						75	
Ala	Gly	Pro	Ala	Ser	Arg	Leu	Leu	Trp	Ile	Gly	Leu	Gln	Arg	Gln
				80				85						90	

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Ala Arg Gln Cys Gln Leu Gln Arg Pro Leu Arg Gly Phe Thr Trp
                 95                  100                 105

Thr Thr Gly Asp Gln Asp Thr Ala Phe Thr Asn Trp Ala Gln Pro
                110                 115                 120

Ala Ser Gly Gly Pro Cys Pro Ala Gln Arg Cys Val Ala Leu Glu
                125                 130                 135

Ala Ser Gly Glu His Arg Trp Leu Glu Gly Ser Cys Thr Leu Ala
                140                 145                 150

Val Asp Gly Tyr Leu Cys Gln Phe Gly Phe Glu Gly Ala Cys Pro
                155                 160                 165

Ala Leu Gln Asp Glu Ala Gly Gln Ala Gly Pro Ala Val Tyr Thr
                170                 175                 180

Thr Pro Phe His Leu Val Ser Thr Glu Phe Glu Trp Leu Pro Phe
                185                 190                 195

Gly Ser Val Ala Ala Val Gln Cys Gln Ala Gly Arg Gly Ala Ser
                200                 205                 210

Leu Leu Cys Val Lys Gln Pro Glu Gly Gly Val Gly Trp Ser Arg
                215                 220                 225

Ala Gly Pro Leu Cys Leu Gly Thr Gly Cys Ser Pro Asp Asn Gly
                230                 235                 240

Gly Cys Glu His Glu Cys Val Glu Glu Val Asp Gly His Val Ser
                245                 250                 255

Cys Arg Cys Thr Glu Gly Phe Arg Leu Ala Ala Asp Gly Arg Ser
                260                 265                 270

Cys Glu Asp Pro Cys Ala Gln Ala Pro Cys Glu Gln Gln Cys Glu
                275                 280                 285

Pro Gly Gly Pro Gln Gly Tyr Ser Cys His Cys Arg Leu Gly Phe
                290                 295                 300

Arg Pro Ala Glu Asp Asp Pro His Arg Cys Val Asp Thr Asp Glu
                305                 310                 315

Cys Gln Ile Ala Gly Val Cys Gln Gln Met Cys Val Asn Tyr Val
                320                 325                 330

Gly Gly Phe Glu Cys Tyr Cys Ser Glu Gly His Glu Leu Glu Ala
                335                 340                 345

Asp Gly Ile Ser Cys Ser Pro Ala Gly Ala Met Gly Ala Gln Ala
                350                 355                 360

Ser Gln Asp Leu Gly Asp Glu Leu Leu Asp Asp Gly Glu Asp Glu
                365                 370                 375

Glu Asp Glu Asp Glu Ala Trp Lys Ala Phe Asn Gly Gly Trp Thr
                380                 385                 390

Glu Met Pro Gly Ile Leu Trp Met Glu Pro Thr Gln Pro Pro Asp
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395 400 405

Phe Ala Leu Ala Tyr Arg Pro Ser Phe Pro Glu Asp Arg Glu Pro
410 415 420

Gln Ile Pro Tyr Pro Glu Pro Thr Trp Pro Pro Pro Leu Ser Ala
425 430 435

Pro Arg Val Pro Tyr His Ser Ser Val Leu Ser Val Thr Arg Pro
440 445 450

Val Val Val Ser Ala Thr His Pro Thr Leu Pro Ser Ala His Gln
455 460 465

Pro Pro Val Ile Pro Ala Thr His Pro Ala Leu Ser Arg Asp His
470 475 480

Gln Ile Pro Val Ile Ala Ala Asn Tyr Pro Asp Leu Pro Ser Ala
485 490 495

Tyr Gln Pro Gly Ile Leu Ser Val Ser His Ser Ala Gln Pro Pro
500 505 510

Ala His Gln Pro Pro Met Ile Ser Thr Lys Tyr Pro Glu Leu Phe
515 520 525

Pro Ala His Gln Ser Pro Met Phe Pro Asp Thr Arg Val Ala Gly
530 535 540

Thr Gln Thr Thr Thr His Leu Pro Gly Ile Pro Pro Asn His Ala
545 550 555

Pro Leu Val Thr Thr Leu Gly Ala Gln Leu Pro Pro Gln Ala Pro
560 565 570

Asp Ala Leu Val Leu Arg Thr Gln Ala Thr Gln Leu Pro Ile Ile
575 580 585

Pro Thr Ala Gln Pro Ser Leu Thr Thr Thr Ser Arg Ser Pro Val
590 595 600

Ser Pro Ala His Gln Ile Ser Val Pro Ala Ala Thr Gln Pro Ala
605 610 615

Ala Leu Pro Thr Leu Leu Pro Ser Gln Ser Pro Thr Asn Gln Thr
620 625 630

Ser Pro Ile Ser Pro Thr His Pro His Ser Lys Ala Pro Gln Ile
635 640 645

Pro Arg Glu Asp Gly Pro Ser Pro Lys Leu Ala Leu Trp Leu Pro
650 655 660

Ser Pro Ala Pro Thr Ala Ala Pro Thr Ala Leu Gly Glu Ala Gly
665 670 675

Leu Ala Glu His Ser Gln Arg Asp Asp Arg Trp Leu Leu Val Ala
680 685 690

Leu Leu Val Pro Thr Cys Val Phe Leu Val Val Leu Leu Ala Leu
695 700 705

Gly Ile Val Tyr Cys Thr Arg Cys Gly Pro His Ala Pro Asn Lys
710 715 720

Arg Ile Thr Asp Cys Tyr Arg Trp Val Ile His Ala Gly Ser Lys
725 730 735

Ser Pro Thr Glu Pro Met Pro Pro Arg Gly Ser Leu Thr Gly Val
740 745 750

Gln Thr Cys Arg Thr Ser Val
755

<210> 103
<211> 2269
<212> DNA
<213> Homo sapien

<400> 103
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cagtttactg catgcctgga gagaacacag cagtaaaaac caggtttgct 200

actggaaaaa gaggaaagag aagactttca ttgacggacc cagccatggc 250

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gtaaataccc atatgtcct 2269

<210> 104
<211> 496
<212> PRT
<213> Homo sapien

<400> 104

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Ala	Ala	Ala	Tyr	Asn	Asn	Phe	Arg	Lys	Ser	Met	Asp	Ser	Ile	Gly
				20				25					30	

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Lys Lys Gln Tyr Gln Val Gln His Gly Ser Cys Ser Tyr Thr Phe
                35                  40                  45

Leu Leu Pro Glu Met Asp Asn Cys Arg Ser Ser Ser Ser Pro Tyr
                50                  55                  60

Val Ser Asn Ala Val Gln Arg Asp Ala Pro Leu Glu Tyr Asp Asp
                65                  70                  75

Ser Val Gln Arg Leu Gln Val Leu Glu Asn Ile Met Glu Asn Asn
                80                  85                  90

Thr Gln Trp Leu Met Lys Leu Glu Asn Tyr Ile Gln Asp Asn Met
                95                  100                 105

Lys Lys Glu Met Val Glu Ile Gln Gln Asn Ala Val Gln Asn Gln
                110                 115                 120

Thr Ala Val Met Ile Glu Ile Gly Thr Asn Leu Leu Asn Gln Thr
                125                 130                 135

Ala Glu Gln Thr Arg Lys Leu Thr Asp Val Glu Ala Gln Val Leu
                140                 145                 150

Asn Gln Thr Thr Arg Leu Glu Leu Gln Leu Leu Glu His Ser Leu
                155                 160                 165

Ser Thr Asn Lys Leu Glu Lys Gln Ile Leu Asp Gln Thr Ser Glu
                170                 175                 180

Ile Asn Lys Leu Gln Asp Lys Asn Ser Phe Leu Glu Lys Lys Val
                185                 190                 195

Leu Ala Met Glu Asp Lys His Ile Ile Gln Leu Gln Ser Ile Lys
                200                 205                 210

Glu Glu Lys Asp Gln Leu Gln Val Leu Val Ser Lys Gln Asn Ser
                215                 220                 225

Ile Ile Glu Glu Leu Glu Lys Lys Ile Val Thr Ala Thr Val Asn
                230                 235                 240

Asn Ser Val Leu Gln Lys Gln Gln His Asp Leu Met Glu Thr Val
                245                 250                 255

Asn Asn Leu Leu Thr Met Met Ser Thr Ser Asn Ser Ala Lys Asp
                260                 265                 270

Pro Thr Val Ala Lys Glu Glu Gln Ile Ser Phe Arg Asp Cys Ala
                275                 280                 285

Glu Val Phe Lys Ser Gly His Thr Thr Asn Gly Ile Tyr Thr Leu
                290                 295                 300

Thr Phe Pro Asn Ser Thr Glu Glu Ile Lys Ala Tyr Cys Asp Met
                305                 310                 315

Glu Ala Gly Gly Gly Gly Trp Thr Ile Ile Gln Arg Arg Glu Asp
                320                 325                 330
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Gly Ser Val Asp Phe Gln Arg Thr Trp Lys Glu Tyr Lys Val Gly
335 340 345

Phe Gly Asn Pro Ser Gly Glu Tyr Trp Leu Gly Asn Glu Phe Val
350 355 360

Ser Gln Leu Thr Asn Gln Gln Arg Tyr Val Leu Lys Ile His Leu
365 370 375

Lys Asp Trp Glu Gly Asn Glu Ala Tyr Ser Leu Tyr Glu His Phe
380 385 390

Tyr Leu Ser Ser Glu Glu Leu Asn Tyr Arg Ile His Leu Lys Gly
395 400 405

Leu Thr Gly Thr Ala Gly Lys Ile Ser Ser Ile Ser Gln Pro Gly
410 415 420

Asn Asp Phe Ser Thr Lys Asp Gly Asp Asn Asp Lys Cys Ile Cys
425 430 435

Lys Cys Ser Gln Met Leu Thr Gly Gly Trp Trp Phe Asp Ala Cys
440 445 450

Gly Pro Ser Asn Leu Asn Gly Met Tyr Tyr Pro Gln Arg Gln Asn
455 460 465

Thr Asn Lys Phe Asn Gly Ile Lys Trp Tyr Tyr Trp Lys Gly Ser
470 475 480

Gly Tyr Ser Leu Lys Ala Thr Thr Met Met Ile Arg Pro Ala Asp
485 490 495

Phe

<210> 105
<211> 2076
<212> DNA
<213> Homo sapien

<400> 105
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ttaaaataaa atgaaaattg tattat 2076

<210> 106
<211> 419
<212> PRT
<213> Homo sapien

<400> 106

Met	His	Leu	Leu	Gly	Phe	Phe	Ser	Val	Ala	Cys	Ser	Leu	Leu	Ala	
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Ala	Ala	Leu	Leu	Pro	Gly	Pro	Arg	Glu	Ala	Pro	Ala	Ala	Ala	Ala	
				20					25						30
Ala	Phe	Glu	Ser	Gly	Leu	Asp	Leu	Ser	Asp	Ala	Glu	Pro	Asp	Ala	
				35					40						45
Gly	Glu	Ala	Thr	Ala	Tyr	Ala	Ser	Lys	Asp	Leu	Glu	Glu	Gln	Leu	
				50					55						60
Arg	Ser	Val	Ser	Ser	Val	Asp	Glu	Leu	Met	Thr	Val	Leu	Tyr	Pro	
				65					70						75
Glu	Tyr	Trp	Lys	Met	Tyr	Lys	Cys	Gln	Leu	Arg	Lys	Gly	Gly	Trp	
				80					85						90
Gln	His	Asn	Arg	Glu	Gln	Ala	Asn	Leu	Asn	Ser	Arg	Thr	Glu	Glu	
				95					100						105
Thr	Ile	Lys	Phe	Ala	Ala	Ala	His	Tyr	Asn	Thr	Glu	Ile	Leu	Lys	
				110					115						120
Ser	Ile	Asp	Asn	Glu	Trp	Arg	Lys	Thr	Gln	Cys	Met	Pro	Arg	Glu	
				125					130						135
Val	Cys	Ile	Asp	Val	Gly	Lys	Glu	Phe	Gly	Val	Ala	Thr	Asn	Thr	
				140					145						150
Phe	Phe	Lys	Pro	Pro	Cys	Val	Ser	Val	Tyr	Arg	Cys	Gly	Gly	Cys	
				155					160						165
Cys	Asn	Ser	Glu	Gly	Leu	Gln	Cys	Met	Asn	Thr	Ser	Thr	Ser	Tyr	
				170					175						180
Leu	Ser	Lys	Thr	Leu	Phe	Glu	Ile	Thr	Val	Pro	Leu	Ser	Gln	Gly	
				185					190						195
Pro	Lys	Pro	Val	Thr	Ile	Ser	Phe	Ala	Asn	His	Thr	Ser	Cys	Arg	
				200					205						210
Cys	Met	Ser	Lys	Leu	Asp	Val	Tyr	Arg	Gln	Val	His	Ser	Ile	Ile	
				215					220						225
Arg	Arg	Ser	Leu	Pro	Ala	Thr	Leu	Pro	Gln	Cys	Gln	Ala	Ala	Asn	
				230					235						240
Lys	Thr	Cys	Pro	Thr	Asn	Tyr	Met	Trp	Asn	Asn	His	Ile	Cys	Arg	
				245					250						255

Cys Leu Ala Gln Glu Asp Phe Met Phe Ser Ser Asp Ala Gly Asp
260 265 270

Asp Ser Thr Asp Gly Phe His Asp Ile Cys Gly Pro Asn Lys Glu
275 280 285

Leu Asp Glu Glu Thr Cys Gln Cys Val Cys Arg Ala Gly Leu Arg
290 295 300

Pro Ala Ser Cys Gly Pro His Lys Glu Leu Asp Arg Asn Ser Cys
305 310 315

Gln Cys Val Cys Lys Asn Lys Leu Phe Pro Ser Gln Cys Gly Ala
320 325 330

Asn Arg Glu Phe Asp Glu Asn Thr Cys Gln Cys Val Cys Lys Arg
335 340 345

Thr Cys Pro Arg Asn Gln Pro Leu Asn Pro Gly Lys Cys Ala Cys
350 355 360

Glu Cys Thr Glu Ser Pro Gln Lys Cys Leu Leu Lys Gly Lys Lys
365 370 375

Phe His His Gln Thr Cys Ser Cys Tyr Arg Arg Pro Cys Thr Asn
380 385 390

Arg Gln Lys Ala Cys Glu Pro Gly Phe Ser Tyr Ser Glu Glu Val
395 400 405

Cys Arg Cys Val Pro Ser Tyr Trp Lys Arg Pro Gln Met Ser
410 415

<210> 107
<211> 2653
<212> DNA
<213> Homo sapien

<400> 107
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gatactctgt cagatgggaa gacatgaatg cacactagcc tctccaggaa 2150

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gcccaacctc ctgacctgtc accgtgagca gctttggaaa caggaccaca 2250

aaaatgaaag catgtctcaa tagtaaaaga taacaagatc tttcaggaaa 2300

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<210> 108
<211> 562
<212> PRT
<213> Homo sapien

<400> 108

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Arg	Arg	Gly	Ala	Arg	Ser	Tyr	Gln	Val	Ile	Cys	Arg	Asp	Glu	Lys
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Thr	Gln	Met	Ile	Tyr	Gln	Gln	His	Gln	Ser	Trp	Leu	Arg	Pro	Val
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Leu	Arg	Ser	Asn	Arg	Val	Glu	Tyr	Cys	Trp	Cys	Asn	Ser	Gly	Arg
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Ala	Gln	Cys	His	Ser	Val	Pro	Val	Lys	Ser	Cys	Ser	Glu	Pro	Arg
				80				85						90	
Cys	Phe	Asn	Gly	Gly	Thr	Cys	Gln	Gln	Ala	Leu	Tyr	Phe	Ser	Asp
				95				100						105	
Phe	Val	Cys	Gln	Cys	Pro	Glu	Gly	Phe	Ala	Gly	Lys	Cys	Cys	Glu
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Ile	Asp	Thr	Arg	Ala	Thr	Cys	Tyr	Glu	Asp	Gln	Gly	Ile	Ser	Tyr
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Arg	Gly	Thr	Trp	Ser	Thr	Ala	Glu	Ser	Gly	Ala	Glu	Cys	Thr	Asn
				140				145						150	

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Pro Asp Ala Ile Arg Leu Gly Leu Gly Asn His Asn Tyr Cys Arg
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Asn Pro Asp Arg Asp Ser Lys Pro Trp Cys Tyr Val Phe Lys Ala
                185                 190                 195

Gly Lys Tyr Ser Ser Glu Phe Cys Ser Thr Pro Ala Cys Ser Glu
                200                 205                 210

Gly Asn Ser Asp Cys Tyr Phe Gly Asn Gly Ser Ala Tyr Arg Gly
                215                 220                 225

Thr His Ser Leu Thr Glu Ser Gly Ala Ser Cys Leu Pro Trp Asn
                230                 235                 240

Ser Met Ile Leu Ile Gly Lys Val Tyr Thr Ala Gln Asn Pro Ser
                245                 250                 255

Ala Gln Ala Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro
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Asp Gly Asp Ala Lys Pro Trp Cys His Val Leu Lys Asn Arg Arg
                275                 280                 285

Leu Thr Trp Glu Tyr Cys Asp Val Pro Ser Cys Ser Thr Cys Gly
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Leu Arg Gln Tyr Ser Gln Pro Gln Phe Arg Ile Lys Gly Gly Leu
                305                 310                 315

Phe Ala Asp Ile Ala Ser His Pro Trp Gln Ala Ala Ile Phe Ala
                320                 325                 330

Lys His Arg Arg Ser Pro Gly Glu Arg Phe Leu Cys Gly Gly Ile
                335                 340                 345

Leu Ile Ser Ser Cys Trp Ile Leu Ser Ala Ala His Cys Phe Gln
                350                 355                 360

Glu Arg Phe Pro Pro His His Leu Thr Val Ile Leu Gly Arg Thr
                365                 370                 375

Tyr Arg Val Val Pro Gly Glu Glu Glu Gln Lys Phe Glu Val Glu
                380                 385                 390

Lys Tyr Ile Val His Lys Glu Phe Asp Asp Asp Thr Tyr Asp Asn
                395                 400                 405

Asp Ile Ala Leu Leu Gln Leu Lys Ser Asp Ser Ser Arg Cys Ala
                410                 415                 420

Gln Glu Ser Ser Val Val Arg Thr Val Cys Leu Pro Pro Ala Asp
                425                 430                 435

Leu Gln Leu Pro Asp Trp Thr Glu Cys Glu Leu Ser Gly Tyr Gly
                440                 445                 450

Lys His Glu Ala Leu Ser Pro Phe Tyr Ser Glu Arg Leu Lys Glu
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455 460 465

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Leu Leu Asn Arg Thr Val Thr Asp Asn Met Leu Cys Ala Gly Asp
485 490 495

Thr Arg Ser Gly Gly Pro Gln Ala Asn Leu His Asp Ala Cys Gln
500 505 510

Gly Asp Ser Gly Gly Pro Leu Val Cys Leu Asn Asp Gly Arg Met
515 520 525

Thr Leu Val Gly Ile Ile Ser Trp Gly Leu Gly Cys Gly Gln Lys
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Ile Arg Asp Asn Met Arg Pro
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<210> 109
<211> 4050
<212> DNA
<213> Homo sapien

<400> 109
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<210> 110
<211> 575
<212> PRT
<213> Homo sapien

<400> 110

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				20				25						30	
Val	Glu	His	Asp	Cys	Phe	Ala	Leu	Tyr	Pro	Gly	Pro	Ala	Thr	Phe	
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Leu	Asn	Ala	Ser	Gln	Ile	Cys	Asp	Gly	Leu	Arg	Gly	His	Leu	Met	
				50				55						60	
Thr	Val	Arg	Ser	Ser	Val	Ala	Ala	Asp	Val	Ile	Ser	Leu	Leu	Leu	
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Asn	Gly	Asp	Gly	Gly	Val	Gly	Arg	Arg	Arg	Leu	Trp	Ile	Gly	Leu	
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Gln	Leu	Pro	Pro	Gly	Cys	Gly	Asp	Pro	Lys	Arg	Leu	Gly	Pro	Leu	
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Arg	Gly	Phe	Gln	Trp	Val	Thr	Gly	Asp	Asn	Asn	Thr	Ser	Tyr	Ser	
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Arg	Trp	Ala	Arg	Leu	Asp	Leu	Asn	Gly	Ala	Pro	Leu	Cys	Gly	Pro	
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Leu	Cys	Val	Ala	Val	Ser	Ala	Ala	Glu	Ala	Thr	Val	Pro	Ser	Glu	
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Pro	Ile	Trp	Glu	Glu	Gln	Gln	Cys	Glu	Val	Lys	Ala	Asp	Gly	Phe	
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Leu	Cys	Glu	Phe	His	Phe	Pro	Ala	Thr	Cys	Arg	Pro	Leu	Ala	Val	
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Glu	Pro	Gly	Ala	Ala	Ala	Ala	Ala	Val	Ser	Ile	Thr	Tyr	Gly	Thr	
				185				190						195	
Pro	Phe	Ala	Ala	Arg	Gly	Ala	Asp	Phe	Gln	Ala	Leu	Pro	Val	Gly	
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Ser	Ser	Ala	Ala	Val	Ala	Pro	Leu	Gly	Leu	Gln	Leu	Met	Cys	Thr	
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Ala	Pro	Pro	Gly	Ala	Val	Gln	Gly	His	Trp	Ala	Arg	Glu	Ala	Pro	
				230				235						240	

Gly Ala Trp Asp Cys Ser Val Glu Asn Gly Gly Cys Glu His Ala
245 250 255

Cys Asn Ala Ile Pro Gly Ala Pro Arg Cys Gln Cys Pro Ala Gly
260 265 270

Ala Ala Leu Gln Ala Asp Gly Arg Ser Cys Thr Ala Ser Ala Thr
275 280 285

Gln Ser Cys Asn Asp Leu Cys Glu His Phe Cys Val Pro Asn Pro
290 295 300

Asp Gln Pro Gly Ser Tyr Ser Cys Met Cys Glu Thr Gly Tyr Arg
305 310 315

Leu Ala Ala Asp Gln His Arg Cys Glu Asp Val Asp Asp Cys Ile
320 325 330

Leu Glu Pro Ser Pro Cys Pro Gln Arg Cys Val Asn Thr Gln Gly
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Gly Phe Glu Cys His Cys Tyr Pro Asn Tyr Asp Leu Val Asp Gly
350 355 360

Glu Cys Val Glu Pro Val Asp Pro Cys Phe Arg Ala Asn Cys Glu
365 370 375

Tyr Gln Cys Gln Pro Leu Asn Gln Thr Ser Tyr Leu Cys Val Cys
380 385 390

Ala Glu Gly Phe Ala Pro Ile Pro His Glu Pro His Arg Cys Gln
395 400 405

Met Phe Cys Asn Gln Thr Ala Cys Pro Ala Asp Cys Asp Pro Asn
410 415 420

Thr Gln Ala Ser Cys Glu Cys Pro Glu Gly Tyr Ile Leu Asp Asp
425 430 435

Gly Phe Ile Cys Thr Asp Ile Asp Glu Cys Glu Asn Gly Gly Phe
440 445 450

Cys Ser Gly Val Cys His Asn Leu Pro Gly Thr Phe Glu Cys Ile
455 460 465

Cys Gly Pro Asp Ser Ala Leu Ala Arg His Ile Gly Thr Asp Cys
470 475 480

Asp Ser Gly Lys Val Asp Gly Gly Asp Ser Gly Ser Gly Glu Pro
485 490 495

Pro Pro Ser Pro Thr Pro Gly Ser Thr Leu Thr Pro Pro Ala Val
500 505 510

Gly Leu Val His Ser Gly Leu Leu Ile Gly Ile Ser Ile Ala Ser
515 520 525

Leu Cys Leu Val Val Ala Leu Leu Ala Leu Leu Cys His Leu Arg
530 535 540

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Thr Pro Gln Arg Leu
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<211> 2153
<212> DNA
<213> Homo sapien

<400> 111
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ttggaaaagc aaatgctttt acacaacaga cacagagtgt gacctcaccg 400

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tgagaactcc ccagagttca caccttacct ggagacaaac ctcggacagc 550

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<210> 112
<211> 295
<212> PRT
<213> Homo sapien

<400> 112

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				20					25					30	
Gly	Ala	Ser	Gly	Thr	Thr	Asn	Thr	Val	Ala	Ala	Tyr	Asn	Leu	Thr
				35					40					45	
Trp	Lys	Ser	Thr	Asn	Phe	Lys	Thr	Ile	Leu	Glu	Trp	Glu	Pro	Lys
				50					55					60	
Pro	Val	Asn	Gln	Val	Tyr	Thr	Val	Gln	Ile	Ser	Thr	Lys	Ser	Gly

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Asp Trp Lys Ser Lys Cys Phe Tyr Thr Thr Asp Thr Glu Cys Asp
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Leu Thr Asp Glu Ile Val Lys Asp Val Lys Gln Thr Tyr Leu Ala
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Arg Val Phe Ser Tyr Pro Ala Gly Asn Val Glu Ser Thr Gly Ser
110 115 120

Ala Gly Glu Pro Leu Tyr Glu Asn Ser Pro Glu Phe Thr Pro Tyr
125 130 135

Leu Glu Thr Asn Leu Gly Gln Pro Thr Ile Gln Ser Phe Glu Gln
140 145 150

Val Gly Thr Lys Val Asn Val Thr Val Glu Asp Glu Arg Thr Leu
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Val Arg Arg Asn Asn Thr Phe Leu Ser Leu Arg Asp Val Phe Gly
170 175 180

Lys Asp Leu Ile Tyr Thr Leu Tyr Tyr Trp Lys Ser Ser Ser Ser
185 190 195

Gly Lys Lys Thr Ala Lys Thr Asn Thr Asn Glu Phe Leu Ile Asp
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Val Asp Lys Gly Glu Asn Tyr Cys Phe Ser Val Gln Ala Val Ile
215 220 225

Pro Ser Arg Thr Val Asn Arg Lys Ser Thr Asp Ser Pro Val Glu
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Cys Met Gly Gln Glu Lys Gly Glu Phe Arg Glu Ile Phe Tyr Ile
245 250 255

Ile Gly Ala Val Val Phe Val Val Ile Ile Leu Val Ile Ile Leu
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Ala Ile Ser Leu His Lys Cys Arg Lys Ala Gly Val Gly Gln Ser
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Trp Lys Glu Asn Ser Pro Leu Asn Val Ser
290 295

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<211> 2696
<212> DNA
<213> Homo sapien

<400> 113
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<210> 114
<211> 362
<212> PRT
<213> Homo sapien

<400> 114

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				20				25					30	

Gly	Leu	Pro	Thr	Asn	Cys	Leu	Ala	Leu	Trp	Ala	Ala	Tyr	Arg	Gln
				35				40					45	

Val	Gln	Gln	Arg	Asn	Glu	Leu	Gly	Val	Tyr	Leu	Met	Asn	Leu	Ser
				50				55					60	

Ile	Ala	Asp	Leu	Leu	Tyr	Ile	Cys	Thr	Leu	Pro	Leu	Trp	Val	Asp
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Tyr	Phe	Leu	His	His	Asp	Asn	Trp	Ile	His	Gly	Pro	Gly	Ser	Cys

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                 80                  85                  90

Lys Leu Phe Gly Phe Ile Phe Tyr Thr Asn Ile Tyr Ile Ser Ile
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Ala Phe Leu Cys Cys Ile Ser Val Asp Arg Tyr Leu Ala Val Ala
                110                 115                 120

His Pro Leu Arg Phe Ala Arg Leu Arg Arg Val Lys Thr Ala Val
                125                 130                 135

Ala Val Ser Ser Val Val Trp Ala Thr Glu Leu Gly Ala Asn Ser
                140                 145                 150

Ala Pro Leu Phe His Asp Glu Leu Phe Arg Asp Arg Tyr Asn His
                155                 160                 165

Thr Phe Cys Phe Glu Lys Phe Pro Met Glu Gly Trp Val Ala Trp
                170                 175                 180

Met Asn Leu Tyr Arg Val Phe Val Gly Phe Leu Phe Pro Trp Ala
                185                 190                 195

Leu Met Leu Leu Ser Tyr Arg Gly Ile Leu Arg Ala Val Arg Gly
                200                 205                 210

Ser Val Ser Thr Glu Arg Gln Glu Lys Ala Lys Ile Lys Arg Leu
                215                 220                 225

Ala Leu Ser Leu Ile Ala Ile Val Leu Val Cys Phe Ala Pro Tyr
                230                 235                 240

His Val Leu Leu Leu Ser Arg Ser Ala Ile Tyr Leu Gly Arg Pro
                245                 250                 255

Trp Asp Cys Gly Phe Glu Glu Arg Val Phe Ser Ala Tyr His Ser
                260                 265                 270

Ser Leu Ala Phe Thr Ser Leu Asn Cys Val Ala Asp Pro Ile Leu
                275                 280                 285

Tyr Cys Leu Val Asn Glu Gly Ala Arg Ser Asp Val Ala Lys Ala
                290                 295                 300

Leu His Asn Leu Leu Arg Phe Leu Ala Ser Asp Lys Pro Gln Glu
                305                 310                 315

Met Ala Asn Ala Ser Leu Thr Leu Glu Thr Pro Leu Thr Ser Lys
                320                 325                 330

Arg Asn Ser Thr Ala Lys Ala Met Thr Gly Ser Trp Ala Ala Thr
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Pro Pro Ser Gln Gly Asp Gln Val Gln Leu Lys Met Leu Pro Pro
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Ala Gln
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<211> 3354

<212> DNA
<213> Homo sapien

<400> 115
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ggaaccccat ggcttgcaat ggcagtgcgg ccaggggggca ctttgaccct 250

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aaaa 3354

<210> 116
<211> 426
<212> PRT
<213> Homo sapien

<400> 116

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Tyr	Pro	Gly	Gly	Ala	Arg	Asn	Pro	Met	Ala	Cys	Asn	Gly	Ser	Ala
				20					25					30	
Ala	Arg	Gly	His	Phe	Asp	Pro	Glu	Asp	Leu	Asn	Leu	Thr	Asp	Glu
				35					40					45	
Ala	Leu	Arg	Leu	Lys	Tyr	Leu	Gly	Pro	Gln	Gln	Thr	Glu	Leu	Phe
				50					55					60	
Met	Pro	Ile	Cys	Ala	Thr	Tyr	Leu	Leu	Ile	Phe	Val	Val	Gly	Ala
				65					70					75	
Val	Gly	Asn	Gly	Leu	Thr	Cys	Leu	Val	Ile	Leu	Arg	His	Lys	Ala
				80					85					90	
Met	Arg	Thr	Pro	Thr	Asn	Tyr	Tyr	Leu	Phe	Ser	Leu	Ala	Val	Ser
				95					100					105	
Asp	Leu	Leu	Val	Leu	Leu	Val	Gly	Leu	Pro	Leu	Glu	Leu	Tyr	Glu
				110					115					120	
Met	Trp	His	Asn	Tyr	Pro	Phe	Leu	Leu	Gly	Val	Gly	Gly	Cys	Tyr
				125					130					135	
Phe	Arg	Thr	Leu	Leu	Phe	Glu	Met	Val	Cys	Leu	Ala	Ser	Val	Leu
				140					145					150	
Asn	Val	Thr	Ala	Leu	Ser	Val	Glu	Arg	Tyr	Val	Ala	Val	Val	His
				155					160					165	
Pro	Leu	Gln	Ala	Arg	Ser	Met	Val	Thr	Arg	Ala	His	Val	Arg	Arg
				170					175					180	
Val	Leu	Gly	Ala	Val	Trp	Gly	Leu	Ala	Met	Leu	Cys	Ser	Leu	Pro

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Asn Thr Ser Leu His Gly Ile Gln Gln Leu His Val Pro Cys Arg
200 205 210

Gly Pro Val Pro Asp Ser Ala Val Cys Met Leu Val Arg Pro Arg
215 220 225

Ala Leu Tyr Asn Met Val Val Gln Thr Thr Ala Leu Leu Phe Phe
230 235 240

Cys Leu Pro Met Ala Ile Met Ser Val Leu Tyr Leu Leu Ile Gly
245 250 255

Leu Arg Leu Arg Arg Glu Arg Leu Leu Leu Met Gln Glu Ala Lys
260 265 270

Gly Arg Gly Ser Ala Ala Ala Arg Ser Arg Tyr Thr Cys Arg Leu
275 280 285

Gln Gln His Asp Arg Gly Arg Arg Gln Val Thr Lys Met Leu Phe
290 295 300

Val Leu Val Val Val Phe Gly Ile Cys Trp Ala Pro Phe His Ala
305 310 315

Asp Arg Val Met Trp Ser Val Val Ser Gln Trp Thr Asp Gly Leu
320 325 330

His Leu Ala Phe Gln His Val His Val Ile Ser Gly Ile Phe Phe
335 340 345

Tyr Leu Gly Ser Ala Ala Asn Pro Val Leu Tyr Ser Leu Met Ser
350 355 360

Ser Arg Phe Arg Glu Thr Phe Gln Glu Ala Leu Cys Leu Gly Ala
365 370 375

Cys Cys His Arg Leu Arg Pro Arg His Ser Ser His Ser Leu Ser
380 385 390

Arg Met Thr Thr Gly Ser Thr Leu Cys Asp Val Gly Ser Leu Gly
395 400 405

Ser Trp Val His Pro Leu Ala Gly Asn Asp Gly Pro Glu Ala Gln
410 415 420

Gln Glu Thr Asp Pro Ser
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<211> 2512
<212> DNA
<213> Homo sapien

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agcattataa aa 2512

<210> 118
<211> 555
<212> PRT
<213> Homo sapien

<400> 118

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				20					25					30	
Ala	Thr	Phe	Ala	Pro	Ile	Tyr	Val	Gly	Ile	Val	Phe	Leu	Gly	Phe
				35					40					45	
Thr	Pro	Asp	His	Arg	Cys	Arg	Ser	Pro	Gly	Val	Ala	Glu	Leu	Ser
				50					55					60	
Leu	Arg	Cys	Gly	Trp	Ser	Pro	Ala	Glu	Glu	Leu	Asn	Tyr	Thr	Val
				65					70					75	
Pro	Gly	Pro	Gly	Pro	Ala	Gly	Glu	Ala	Ser	Pro	Arg	Gln	Cys	Arg
				80					85					90	
Arg	Tyr	Glu	Val	Asp	Trp	Asn	Gln	Ser	Thr	Phe	Asp	Cys	Val	Asp

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Pro Leu Ala Ser Leu Asp Thr Asn Arg Ser Arg Leu Pro Leu Gly
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Pro Cys Arg Asp Gly Trp Val Tyr Glu Thr Pro Gly Ser Ser Ile
                125                 130                 135

Val Thr Glu Phe Asn Leu Val Cys Ala Asn Ser Trp Met Leu Asp
                140                 145                 150

Leu Phe Gln Ser Ser Val Asn Val Gly Phe Phe Ile Gly Ser Met
                155                 160                 165

Ser Ile Gly Tyr Ile Ala Asp Arg Phe Gly Arg Lys Leu Cys Leu
                170                 175                 180

Leu Thr Thr Val Leu Ile Asn Ala Ala Ala Gly Val Leu Met Ala
                185                 190                 195

Ile Ser Pro Thr Tyr Thr Trp Met Leu Ile Phe Arg Leu Ile Gln
                200                 205                 210

Gly Leu Val Ser Lys Ala Gly Trp Leu Ile Gly Tyr Ile Leu Ile
                215                 220                 225

Thr Glu Phe Val Gly Arg Arg Tyr Arg Arg Thr Val Gly Ile Phe
                230                 235                 240

Tyr Gln Val Ala Tyr Thr Val Gly Leu Leu Val Leu Ala Gly Val
                245                 250                 255

Ala Tyr Ala Leu Pro His Trp Arg Trp Leu Gln Phe Thr Val Ala
                260                 265                 270

Leu Pro Asn Phe Phe Phe Leu Leu Tyr Tyr Trp Cys Ile Pro Glu
                275                 280                 285

Ser Pro Arg Trp Leu Ile Ser Gln Asn Lys Asn Ala Glu Ala Met
                290                 295                 300

Arg Ile Ile Lys His Ile Ala Lys Lys Asn Gly Lys Ser Leu Pro
                305                 310                 315

Ala Ser Leu Gln Arg Leu Arg Leu Glu Glu Glu Thr Gly Lys Lys
                320                 325                 330

Leu Asn Pro Ser Phe Leu Asp Leu Val Arg Thr Pro Gln Ile Arg
                335                 340                 345

Lys His Thr Met Ile Leu Met Tyr Asn Trp Phe Thr Ser Ser Val
                350                 355                 360

Leu Tyr Gln Gly Leu Ile Met His Met Gly Leu Ala Gly Asp Asn
                365                 370                 375

Ile Tyr Leu Asp Phe Phe Tyr Ser Ala Leu Val Glu Phe Pro Ala
                380                 385                 390

Ala Phe Met Ile Ile Leu Thr Ile Asp Arg Ile Gly Arg Arg Tyr
                395                 400                 405
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Pro Trp Ala Ala Ser Asn Met Val Ala Gly Ala Ala Cys Leu Ala
410 415 420

Ser Val Phe Ile Pro Gly Asp Leu Gln Trp Leu Lys Ile Ile Ile
425 430 435

Ser Cys Leu Gly Arg Met Gly Ile Thr Met Ala Tyr Glu Ile Val
440 445 450

Cys Leu Val Asn Ala Glu Leu Tyr Pro Thr Phe Ile Arg Asn Leu
455 460 465

Gly Val His Ile Cys Ser Ser Met Cys Asp Ile Gly Gly Ile Ile
470 475 480

Thr Pro Phe Leu Val Tyr Arg Leu Thr Asn Ile Trp Leu Glu Leu
485 490 495

Pro Leu Met Val Phe Gly Val Leu Gly Leu Val Ala Gly Gly Leu
500 505 510

Val Leu Leu Leu Pro Glu Thr Lys Gly Lys Ala Leu Pro Glu Thr
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545 550 555

<210> 119
<211> 5431
<212> DNA
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Leu Lys Gln Val Phe Gly Lys Gly Leu Ile Lys Ala Ala Met Thr
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Thr Gly Ala Trp Ile Phe Thr Gly Gly Val Ser Thr Gly Val Ile
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Ser His Val Gly Asp Ala Leu Lys Asp His Ser Ser Lys Ser Arg
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Gly Arg Val Cys Ala Ile Gly Ile Ala Pro Trp Gly Ile Val Glu
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Asn Lys Glu Asp Leu Val Gly Lys Asp Val Thr Arg Val Tyr Gln
110 115 120

Thr Met Ser Asn Pro Leu Ser Lys Leu Ser Val Leu Asn Asn Ser
125 130 135

His Thr His Phe Ile Leu Ala Asp Asn Gly Thr Leu Gly Lys Tyr
140 145 150

Gly Ala Glu Val Lys Leu Arg Arg Leu Leu Glu Lys His Ile Ser
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Leu Gln Lys Ile Asn Thr Arg Leu Gly Gln Gly Val Pro Leu Val
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Gly Leu Val Val Glu Gly Gly Pro Asn Val Val Ser Ile Val Leu
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Glu Tyr Leu Gln Glu Glu Pro Pro Ile Pro Val Val Ile Cys Asp
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Gly Ser Gly Arg Ala Ser Asp Ile Leu Ser Phe Ala His Lys Tyr
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Leu Val Thr Val Phe Arg Met Gly Ser Glu Gly Gln Gln Asp Ile
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Glu Met Ala Ile Leu Thr Ala Leu Leu Lys Gly Thr Asn Val Ser
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Ala Pro Asp Gln Leu Ser Leu Ala Leu Ala Trp Asn Arg Val Asp
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Ile Ala Arg Ser Gln Ile Phe Val Phe Gly Pro His Trp Pro Pro
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Leu Gly Ser Leu Ala Pro Pro Thr Asp Ser Lys Ala Thr Glu Lys
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Glu Lys Lys Pro Pro Met Ala Thr Thr Lys Gly Gly Arg Gly Lys
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Gly Lys Gly Lys Lys Lys Gly Lys Val Lys Glu Glu Val Glu Glu
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Glu Thr Asp Pro Arg Lys Ile Glu Leu Leu Asn Trp Val Asn Ala
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Leu Glu Gln Ala Met Leu Asp Ala Leu Val Leu Asp Arg Val Asp
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Phe Val Lys Leu Leu Ile Glu Asn Gly Val Asn Met Gln His Phe
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Leu Thr Ile Pro Arg Leu Glu Glu Leu Tyr Asn Thr Arg Leu Gly
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Pro Pro Asn Thr Leu His Leu Leu Val Arg Asp Val Lys Lys Ser
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Arg Lys Asn Phe Arg Thr Leu Tyr Asn Asn Leu Phe Gly Pro Lys
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Arg Pro Lys Ala Leu Lys Leu Leu Gly Met Glu Asp Asp Glu Pro
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Pro Ala Lys Gly Lys Lys Lys Lys Lys Lys Lys Lys Glu Glu Glu
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Pro Phe His Glu Leu Met Val Trp Ala Val Leu Met Lys Arg Gln
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Lys Ala Leu Val Ala Cys Lys Leu Tyr Lys Ala Met Ala His Glu
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Ser Ser Glu Ser Asp Leu Val Asp Asp Ile Ser Gln Asp Leu Asp
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Asn Asn Ser Lys Asp Phe Gly Gln Leu Ala Leu Glu Leu Leu Asp
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Gln Ser Tyr Lys His Asp Glu Gln Ile Ala Met Lys Leu Leu Thr
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Tyr Glu Leu Lys Asn Trp Ser Asn Ser Thr Cys Leu Lys Leu Ala
635 640 645

Val Ala Ala Lys His Arg Asp Phe Ile Ala His Thr Cys Ser Gln
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Met Leu Leu Thr Asp Met Trp Met Gly Arg Leu Arg Met Arg Lys
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Asn Pro Gly Leu Lys Val Ile Met Gly Ile Leu Leu Pro Pro Thr
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Ile Leu Phe Leu Glu Phe Arg Thr Tyr Asp Asp Phe Ser Tyr Gln
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Thr Ser Lys Glu Asn Glu Asp Gly Lys Glu Lys Glu Glu Glu Asn
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Thr Asp Ala Asn Ala Asp Ala Gly Ser Arg Lys Gly Asp Glu Glu
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Asn Glu His Lys Lys Gln Arg Ser Ile Pro Ile Gly Thr Lys Ile
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Cys Glu Phe Tyr Asn Ala Pro Ile Val Lys Phe Trp Phe Tyr Thr
755 760 765

Ile Ser Tyr Leu Gly Tyr Leu Leu Leu Phe Asn Tyr Val Ile Leu
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Val Arg Met Asp Gly Trp Pro Ser Leu Gln Glu Trp Ile Val Ile
785 790 795

Ser Tyr Ile Val Ser Leu Ala Leu Glu Lys Ile Arg Glu Ile Leu
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Met Ser Glu Pro Gly Lys Leu Ser Gln Lys Ile Lys Val Trp Leu
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Gln Glu Tyr Trp Asn Ile Thr Asp Leu Val Ala Ile Ser Thr Phe

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Tyr Gly Arg Val Ile Tyr Cys Val Asp Ile Ile Phe Trp Tyr Ile
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Arg Val Leu Asp Ile Phe Gly Val Asn Lys Tyr Leu Gly Pro Tyr
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Val Met Met Ile Gly Lys Met Met Ile Asp Met Leu Tyr Phe Val
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Ala Ile Leu His Pro Glu Glu Lys Pro Ser Trp Lys Leu Ala Arg
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Asn Ile Phe Tyr Met Pro Tyr Trp Met Ile Tyr Gly Glu Val Phe
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Ala Asp Gln Ile Asp Leu Tyr Ala Met Glu Ile Asn Pro Pro Cys
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Gly Glu Asn Leu Tyr Asp Glu Glu Gly Lys Arg Leu Pro Pro Cys
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Lys Phe Gln Arg Tyr Gln Leu Ile Met Thr Phe His Asp Arg Pro
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Val Leu Pro Pro Pro Met Ile Ile Leu Ser His Ile Tyr Ile Ile
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Ile Met Arg Leu Ser Gly Arg Cys Arg Lys Lys Arg Glu Gly Asp
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Gln Glu Glu Arg Asp Arg Gly Leu Lys Leu Phe Leu Ser Asp Glu
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Glu Leu Lys Arg Leu His Glu Phe Glu Glu Gln Cys Val Gln Glu
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His Phe Arg Glu Lys Glu Asp Glu Gln Gln Ser Ser Ser Asp Glu
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Arg Ile Arg Val Thr Ser Glu Arg Val Glu Asn Met Ser Met Arg
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Asp Leu Ile Gln Ala Arg Ser Arg Ala Ser Ser Glu Cys Glu Ala
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Thr Tyr Leu Leu Arg Gln Ser Ser Ile Asn Ser Ala Asp Gly Tyr
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Ser Leu Tyr Arg Tyr His Phe Asn Gly Glu Glu Leu Leu Phe Glu
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Asp Thr Ser Leu Ser Thr Ser Pro Gly Thr Gly Val Arg Lys Lys
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Leu Val Pro Glu Cys Gln Asn Ser Leu His Leu Ser Leu Gly Thr
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Ser Thr Ser Ala Thr Pro Asp Gly Ser His Leu Ala Val Asp Asp
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Leu Lys Asn Ala Glu Glu Ser Lys Leu Gly Pro Asp Ile Gly Ile
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Ser Lys Glu Asp Asp Glu Arg Gln Thr Asp Ser Lys Lys Glu Glu
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Lys Ser Arg Ser Phe Val Tyr Ser Arg Gly Arg Lys Leu Val Gly
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Gly Val Asn Gln Asp Val Glu Tyr Ser Ser Ile Thr Asp Gln Gln
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Leu Thr Thr Glu Trp Gln Cys Gln Val Gln Lys Ile Thr Arg Ser
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Asn Ala Leu Thr Pro Pro Pro Thr Thr Pro Glu Trp Val Lys Phe
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Cys Arg Gln Leu Phe Gly Gly Phe Ser Ile Leu Leu Trp Ile Gly
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Lys Ser Ser Lys Ile Met Asp Ser Phe Lys Asn Met Val Pro Gln
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Val Asp Asn Ser Ser Leu Thr Gly Glu Ser Glu Pro Gln Thr Arg
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Ser Pro Glu Phe Thr His Glu Asn Pro Leu Glu Thr Arg Asn Ile
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Cys Phe Phe Ser Thr Asn Cys Val Glu Gly Thr Ala Arg Gly Ile
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Gly Val Ser Phe Phe Val Leu Ser Leu Ile Leu Gly Tyr Ser Trp
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Leu Glu Ala Val Ile Phe Leu Ile Gly Ile Ile Val Ala Asn Val
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Pro Glu Gly Leu Leu Ala Thr Val Thr Val Cys Leu Thr Leu Thr
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Thr Gly Thr Leu Thr Gln Asn Arg Met Thr Val Ala His Met Trp
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Glu Ser Ala Leu Leu Lys Cys Ile Glu Leu Ser Cys Gly Ser Val
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